

FLIGHT

&
The AIRCRAFT
ENGINEER.

First Aero Weekly in the World.
Founder and Editor: STANLEY SPOONER.

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EDITORIAL COMMENT.

"Newspapers are an essential part of our war organisation."
(Sir Auckland Geddes, Minister of National Service.)



N the threshold of another winter of war a further appeal is being made for subscriptions to the Flying Services Fund, which has done splendid work in the interests of the aviation branch during the whole period of hostilities. In the provision of comforts for the officers and men on active service, and in sending parcels to those whose ill-fortune has brought them into the hands of the enemy, the Fund has been very active and has accomplished a great deal. Obviously, these activities cannot be sustained without money, and in view of the enormous extension of the Flying Service more and yet more is required. The Royal Aero Club, which has very actively concerned itself in the collection and administration of the Fund, is taking special measures for the raising of the large amount that will be required during the coming winter and has arranged for collecting boxes to be placed in theatres and music halls in order to reach the

The
Flying
Services
Fund.

mass of the people, who as far as they realise, have no direct interests in the welfare of our flying officers and men, but who would nevertheless be disposed to contribute in response to an immediate appeal. From this source a good deal of money will doubtless be forthcoming, but nothing like the total that will be required to sustain the work of the Fund on a similar basis to that of preceding years. After all, such a Fund as this should meet with its major support from those who have a direct interest in the work of the service to which it is related, and it is, therefore, from the aircraft industry and from those who have relatives or friends in the R.A.F. that we expect a generous response to the appeal that is now being made. There is no need for us to recapitulate the manifold directions in which the work of the Fund lies. All that is known to the readers of "FLIGHT," and we are assured that nothing more is necessary than that we should call attention to its needs and ask them to loosen their purse strings in assistance of so essential a work as that of the Flying Services Fund. Subscriptions should be sent to the Secretary of the Royal Aero Club, 3, Clifford Street, W., by whom they will be acknowledged with gratitude.

A Change of Front.

Some time ago we drew attention to an Army Order regarding the trial of inventions by officers and men of the Army, in which commanding officers were expressly prohibited from testing such inventions and ordered to submit them to the War Office through the "proper channels." At the time we expressed a decided opinion that such an order was likely to operate most adversely to the best interests of the Service by discouraging all invention and attempt to improve material. Apparently the Army Council has now discovered that this opinion was correct and that its Order was bad in conception and likely to be worse in effect, since an amending Order has been issued under date of the 9th inst., which says: "In reference to Army Order 221 of 1918, officers and soldiers serving with Expeditionary Forces will submit their suggestions through the usual channels to General Headquarters, Expeditionary Force. In order that all facilities may be given officers and soldiers to develop ideas for the improvement of service equipment the Field-Marshal Commanding-in-Chief, British Armies in France, and General Officers Commanding-in-Chief other Expeditionary Forces, may

issue routine orders authorising trials of inventions submitted to their headquarters in accordance with this Army Order."

We are unfeignedly pleased that the Army Council has seen fit to set right what was likely to have become a heavy drag on the wheels of invention. Obviously, we are unable to even refer to the many inventions and improvements in existing material which have been brought about through the encouragement extended to officers and men actually serving in the field and which have come to our own direct knowledge. It is sufficient to say that these have been more than a few and that, in the nature of things, they are but a fraction of the whole. In any case, they have been quite numerous enough to convince that a very large amount of good work has been done in the field, very little of which could have been accomplished under the crippling influence of Army Order 221 of 1918 had that mistaken instruction been in force at the time. How much, for example, does the R.A.F. owe for its enormous increase in the efficiency of machines, engines and equipment generally to the inventive genius of its officers and men on active service? No one can say definitely, but it is probably not going too far to say that a goodly proportion of the detail improvements in equipment have been evolved in the field, even if they have been developed at home, and to actively discourage invention would be the most pernicious policy the Army Council could possibly adopt. However, the objectionable Order has happily been rescinded and matters can now pursue a normal course.

The Right Use of Man-Power.

Sir Donald Maclean, in his capacity of Chairman of the House of Commons Committee of the London Appeal Tribunal, has said a good many wise things relative to the methods adopted in the use of the "comb," but none better than the remarks he made the other day regarding the taking of unfit men for military service. He said that the military conditions to-day were more favourable than even the most extravagantly optimistic would have thought possible a couple of months ago. Great military victories, however, always carried with them great losses, which had to be made good, and tribunals would have to discharge their part in supplying men for the Army and its ancillary services. Whatever excuse there might have been in the past, for anyone concerned with sending unfit men into the Army, the last vestige of reason for doing so had now disappeared. Tribunals might also well bear in mind that while man-power was the root of the military offensive it was also the root of the financial offensive. The military burden might grow less but the financial burden grew greater, and the duty of tribunals holding the balance between the military call and the civil need was to see that they exercised their discretion in such a way as to feed in every possible way the man-power which was necessary to keep up the financial offensive of the nation.

These are words of wisdom to which it is permissible to hope those who may be concerned with the allocation of our man-power will pay due heed. There is not the slightest doubt that the whole man-power question has been badly bungled by the Government and its advisers. They have worked along the lines of mere opportunism and without consideration of the real needs of the nation. We have pointed out long ago that even in the case of a mighty Power

like the British Empire there must be a set limit to its resources. During the four years of war the British Empire has maintained the greatest Navy in history, which has kept the seas open to commerce and the transport of Allied troops. It is a commonplace that without the British Navy there would not be an American soldier in France. Without it the Allied cause must have crumbled into dust within a twelve-month of the outbreak of war. We have created from practically nothing an army that is certainly not less than second in comparison with that of any other belligerent Power. From the beginning Great Britain has been the financial backer of the whole Alliance, to the various parties to which she has advanced many hundreds of millions of pounds, in addition to money advanced to the Dominions on account of their war expenditure. Then, since she got fairly into her stride, Great Britain has been the munitions power-house of the Alliance. She has supplied her Allies with coal and iron, in addition to manufactured products. She has supplied tonnage for their needs, and to-day is providing 60 per cent. of the shipping required to transport the American armies to Europe, while to a very large extent she has made herself responsible for the equipment of those armies. It is a set of achievements which we do rightly to regard with pride, but at the same time we should remember that it has not been accomplished without imposing an enormous strain on our resources—a strain which cannot be kept up indefinitely without causing the most grievous permanent injury to our future as an Empire. If we cannot win the war without its continuation for a further indefinite period, then so be it. We must submit with the best grace, believing that the cause of civilisation must come before all other interests.

We do not, however, believe that the mass question of Britain's war effort has been properly visualised by the men who have constituted our War Governments. They have deferred action in very many cases until it was almost too late, and then have acted "on the jump" and obviously without proper consideration, thereby working incalculable harm to our interests, both present and future. Take, as an example, the events that led up to the present coal crisis. As early as the spring of 1917 competent observers were warning the Cabinet that if our armies in France were to be kept up to strength it would be necessary to extend the provisions of the Military Service Acts, but so satisfied were they with the position that nothing was done, and in his despatch covering the operations of 1917 Sir Douglas Haig laid emphasis on the shortage of trained drafts for the Expeditionary Force. Then came the sweeping German victories of March and April last, and at once the War Cabinet was seized by panic. The Military Service Acts were broadened in scope and a number of middle-aged men were swept into the Army, irrespective to all other interests. The "comb" was put through everywhere—except in those places of refuge where the most-favoured are congregated—and among others 25,000 skilled miners were taken for the fighting service, after, we are told, the position had been carefully examined from every point of view and the Cabinet were satisfied that it would have no adverse effect on coal production.

It should have been abundantly clear to the Cabinet that, with the last few remnants of the French coal-fields again in German possession, the strain on our own sources of production was likely to be accentuated,

and that, therefore, the last place through which the comb should be drawn was the coal mine. However, the Cabinet persisted in its plan, and the result has been that we are faced with a serious shortage of coal during the coming winter, and the action which was taken "after full consideration" has had to be drastically modified, and we are now returning miners from the Army at the rate of 2,000 per day to make good the shortage that ought to have been foreseen from the start. We have taken this as a case in point to show the want of prevision which has characterised the war policy of the present Cabinet. All through it seems to have treated this country as a bottomless reservoir of the material for war. That it is not we ourselves pointed out many months ago, and, as we said then, the Government has to face the salient fact that it can have the men or it can have the money, but it cannot have both. If it takes away the tax-paying portion of the male community, it is sufficiently obvious that there can be no taxes forthcoming to pay the bill. On the other hand, if we are still to continue to be the financial milch-cow of the Alliance, it is equally clear that we must retain in civil life the men who pay the way of the State. The moral of the whole position is that the Government cannot have it both ways, and that it must make up its mind which is the most essential to the needs of war, men or money, and let the country know with as little delay as possible. The present uncertainty of things is not the least disquieting feature of the situation. No-one knows what the Government has in mind, and there is a tendency to think that the latter is carrying on the business of the country in a spirit of opportunism and of action without mature consideration of cause and effect.

"Rot" in the German Armies.

While we are not inclined to pay too much attention to the stories we hear of indiscipline and worse in the German armies in the West, it is reasonably certain that there is something very seriously the matter with the Hun military machine. At the close of the 1917 campaigns the same symptoms had been noted, principally regarding the comparative willingness to surrender which was manifested by the enemy's troops, and there is no doubt the *morale* of the latter had fallen considerably below the level at which it stood at the beginning of that year. Under the influence of the peace with Russia and the German victories in the West early in the present year, coupled with the promise held out by the High Command of an early victorious termination of the war, it certainly rose again to a very high level, and was well maintained up to the closing phases of the battle of the Marne. Since then it seems to

have steadily declined and to have reached so low an ebb that we are justified in the belief that all is not well with the internal economy of the Kaiser's legions. We need take no notice of the stories circulated by neutrals of mutinies in the German army and navy, although there is a certain amount of confirmatory evidence in favour of these statements. For example, the story of the seizure of certain torpedo craft by naval mutineers and the sinking of some of them by pursuing light cruisers is to some extent borne out by the washing ashore of bodies from German torpedo vessels of the sinking of which our own naval authorities have no first-hand knowledge. All we can say is that there *may* have been mutinies, more or less serious in character, but that we should be foolish to accept the tales told by neutrals as indicative of any wide-spread feeling of unrest in the German services.

Much more valuable as an indication of the state of the enemy's *morale* is the growing readiness with which the Hun yields himself prisoner when he is cornered, and the satisfaction he displays when he is at last safe behind the Allied lines. Since the opening of the Allied offensive on the 18th of July the British, French and American armies have between them taken something over 200,000 prisoners, which certainly argues a low state of *morale*. True, the enemy command claims that in the offensives of March-July 212,000 Allied prisoners were taken by their armies, but the claim is, we believe, very far from justifiable, and if we put the actual losses in prisoners at about half that figure it would probably not be far out. But the thing that really matters is the manner in which prisoners are taken, and whatever the numbers we lost in this way earlier in the year we may be sure that they did not yield themselves in the same easy, happy-to-be-taken spirit that is being displayed by the Hun now. We may be wrong, but it seems to us that it is clear evidence of the beginning of "rot" in the German armies. They are convinced now that not only can they not look forward to victory but that they are bound to be beaten in the end, and are thus disposed to get out of a hopeless business at any cost. There is no longer any real hope for them; they realise that they are dupes of a doomed system; and that the best thing the individual can do is to get out of the war by the readiest means, which in this case is surrender. Of course, these symptoms of "rot" are only symptoms so far, and the growth will have to spread a great deal farther before they can produce collapse on a wholesale scale, but they are present, and we cannot doubt that the successive blows of the Allied offensive will help along the process until at last that collapse of *morale* occurs which will render the final victory possible.

Transfer of R.A.M.C. Personnel to R.A.F.

AN Army Order, dated September 9th, states that on the 1st October, 1918, all medical officers and other ranks, Royal Army Medical Corps, employed exclusively with the Royal Air Force will, as noted hereafter, be transferred or attached to the Royal Air Force unless, prior to that date, they give notice of objection to such transfer or attachment:—

(a) Medical officers and dental surgeons holding temporary commissions will be transferred to the Royal Air Force, and will be required to relinquish their temporary commissions in the Royal Army Medical Corps or General List respectively. A *pro rata* gratuity will be issued where an officer is serving under a yearly contract which has not expired.

(b) Officers belonging to the Regular, Special Reserve or Territorial Force, Royal Army Medical Corps, will be attached to the Royal Air Force and continue to serve on the conditions of their present terms of service.

(c) Other ranks, Royal Army Medical Corps, now employed exclusively on Royal Air Force duties at Royal Air Force stations, hospitals and convalescent homes in the United Kingdom will be transferred to the Royal Air Force, and the procedure giving effect to such transfer will, as far as practicable, follow the lines laid down in Army Order 97 of 1918.

Kitchener Scholarships.

INCLUDED in the last Lord Kitchener National Memorial Fund scholarships awarded to disabled officers and men who on the outbreak of war relinquished their studies at universities and hospitals in order to join the forces is the following:—

F. S. Coleman, late air-mech., R.A.F. Scholarship for four years at St. Bartholomew's Hospital.

Charles Brownlee, late Sec. Lieut. R.A.F. Scholarship for three years at Edinburgh University.

HONOURS

Medals for R.A.F.

It was announced in a supplement to the *London Gazette* of September 3rd that His Majesty the King has been graciously pleased to approve of the award of a Bar to the Distinguished Conduct Medal to the undermentioned:—

6391 Sgt. F. Johnson, D.C.M., R.A.F.—For conspicuous gallantry and devotion to duty in encounters with enemy aeroplanes, with the following results:—Attacked and crashed a Pfalz scout, drove down an Albatross out of control. On previous occasions he had destroyed four enemy aeroplanes and driven three down out of control.

(D.C.M. gazetted April 26th, 1917.)

His Majesty the King has been graciously pleased to approve of the award of the Distinguished Conduct Medal to the undermentioned warrant officers, non-commissioned officers, and men, for gallantry and distinguished service in the field:—

36427 Cpl. W. N. Baldwin, R.F.C.—For conspicuous gallantry and devotion to duty. During a withdrawal he collected a party of men, and, under heavy bombing attacks by low-flying enemy aircraft, succeeded in saving a quantity of valuable stores. He directed his men with great zeal and energy, and set them a splendid example of coolness and determination.

240101 Cpl. W. Hill, M.M., Sco. Rif.—For conspicuous gallantry and devotion to duty. He handled his Lewis gun section with great skill and ability, inflicting heavy casualties on the enemy. He scattered an enemy party with Lewis gun and rifle fire. Next day he directed his Lewis gun on an enemy aeroplane, causing it to crash down in flames behind the enemy lines. He did very fine work.

47616 Cpl. P. A. Ovenden, R.A.F.—For conspicuous gallantry and devotion to duty under heavy shell fire whilst in charge of the balloon guard. In spite of heavy shelling, he made repeated attempts to repair a balloon which had been damaged. Later he returned with a party to remove the deflated balloon, when a shell fell amongst them, wounding five. He was largely instrumental in removing them to safety.

1504 Sgt. P. Spargo, R.A.F.—For conspicuous gallantry and devotion to duty. When clouds were low and weather conditions unfavourable, he flew at a height of 300 ft., and in face of intense rifle and machine-gun fire dropped his bombs on the objective, destroying a machine-gun emplacement gun and crew. He then flew along the hostile trenches, bringing machine-gun fire to bear on the occupants, and caused many casualties. He then returned to his aerodrome for more bombs, but in view of the weather conditions he was not allowed to go out again.

Awards for Air Work at Dardanelles.

It was announced in a supplement to the *London Gazette* on September 4th that the King has been pleased to approve of the award of the following honours to the following officers and men in recognition of their services on the occasion of the sortie of the "Goeben" and "Breslau" from the Dardanelles on January 20th, 1918:—

Distinguished Service Cross.

Flt. Comdr. R. S. Sorley, R.N.A.S. (now Temp. Capt., R.A.F.).—For the determined and successful bombing attacks on the "Breslau" and "Goeben" on January 20th, and subsequent days, both by day and by night.

Flt. Lieut. H. V. Worrall, R.N.A.S. (now Hon. Capt., R.A.F.).—Made a successful attack on the "Goeben," obtaining a direct hit, although this was his first night flight.

Flt. Sub-Lieut. R. W. Peel, R.N.A.S. (now Lieut., R.A.F.).—Carried out a determined and courageous bombing attack on the "Goeben" in the face of attacks from a vastly superior enemy air force.

Obs. Sub-Lieut. F. C. Smith, R.N.A.S. (now Lieut., R.A.F.).—Acted as observer for Flt. Comdr. Sorley during a determined and successful bombing attack on the "Breslau" on January 20th, 1918, and also during subsequent day and night attacks on the "Goeben."

The following officers and men have been mentioned in dispatches:—

Flt. Comdr. L. A. Hervey, R.N.A.S. (now Temp. Capt., R.A.F.); Capt. W. R. McBain, M.C., R.F.C.; Flt. Sub-Lieut. S. P. Colt, R.N.A.S. (now Lieut., R.A.F.); Sec. Lieut. A. D. Ferguson, Highland L.I., attd. R.F.C.

Awards for German S.W. Africa.

It was announced in a *London Gazette* supplement on September 4th that the King has been pleased to approve of the following decorations:—

Distinguished Service Cross.

Flt. Sub-Lieut. T. Hinselwood, R.N.A.S. (now Capt., R.A.F.).—For general good work and successful long reconnaissances under fire when serving with the Expeditionary Force in German South-West Africa in 1914. Exhibited courage and resources when compelled to make a forced landing, whilst endeavouring to re-establish touch with the right advance on Olavifontein.

Distinguished Service Medal.

C.P.O., 3rd Grade.—A. J. Humphries, O.N. F. 547 (now R.A.F.).

It was announced in a *London Gazette* supplement on August 22nd that the following decoration has been presented by the President of the French Republic for distinguished services rendered in connection with military operations in German South-West Africa:—

Croix de Guerre.

Capt. K. R. van der Spuy, M.C., Permanent Force (Staff attd. R.F.C.).

Honours for Flying Officers.

It was announced in the *London Gazette* on September 16th that His Majesty the King has been graciously pleased to approve of the following awards to the undermentioned officers and warrant officers, in recognition of their gallantry and devotion to duty in the field:—

Awarded a Bar to the Distinguished Service Order.

T./Sec. Lieut. (T./Capt.) EDWARD MANNOCK, D.S.O., R.E. and R.A.F.—For conspicuous gallantry and devotion to duty. In company with one other scout this officer attacked eight enemy aeroplanes, shooting down one in flames. The next day, when leading his flight, he engaged eight enemy aeroplanes, destroying three himself. The same week he led his patrol against six enemy aeroplanes, shooting down the rear machine, which broke in pieces in the air. The following day he shot down an Albatros two-seater in flames, but later, meeting five scouts, had great difficulty in getting back, his machine being much shot about, but he destroyed one. Two days later, he shot down another two-seater in flames. Eight machines in five days—a fine feat of marksmanship and determination to get to close quarters. As a patrol leader he is unequalled. (D.S.O. gazetted in this *Gazette*.)

Maj. ALBERT DESBRISAY CARTER, D.S.O., New Brunswick R. and R.A.F.—For conspicuous gallantry and devotion to duty as a fighting pilot. In three and a half months he destroyed 13 enemy machines. He showed the utmost determination, keenness and dash, and his various successful encounters, often against odds, make up a splendid record. (D.S.O. gazetted February 18th, 1918.)

Awarded the Distinguished Service Order.

T./Capt. PETER CARPENTER, M.C., R.A.F.—For conspicuous gallantry and devotion to duty. He has destroyed nine enemy machines and driven three down out of control. He has led 46 offensive patrols. On one occasion 12 enemy aircraft were attacked, and on another he led two other machines against 19 of the enemy, destroying six of them. He has at all times shown a magnificent example.

T./Sec. Lieut. (T./Capt.) EDWARD MANNOCK, M.C., R.E., attd. R.A.F.—For conspicuous gallantry and devotion to duty during recent operations. In seven days, while leading patrols and in general engagements, he destroyed seven enemy machines, bringing his total in all to 30. His leadership, dash and courage were of the highest order.

T./Capt. HENRY WINSLOW WOOLLETT, M.C., Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty during recent operations. In two days during three patrols he destroyed eight enemy machines, making his total 22. His leadership, dash and courage were of the highest order.

Awarded a Second Bar to the Military Cross.

T./Capt. WILLIAM GEORGE BARKER, D.S.O., M.C., Gen. List and R.F.C.—For conspicuous gallantry and devotion to duty. When leading patrols he on one occasion attacked eight hostile machines, himself shooting down two, and on another occasion seven, one of which he shot down. In two months he himself destroyed four enemy machines and drove

down one, and burned two balloons. (M.C. gazetted January 10th, 1917. Bar to M.C. gazetted July 18th, 1917.)

T./Capt. **GERALD ERNEST GIBBS, M.C., R.A.F.**—For conspicuous gallantry and devotion to duty. While on patrol he engaged and pursued a hostile two-seater. After repeatedly diving on the enemy machine, the hostile observer waved a white flag and was allowed to land. He landed beside it and took both occupants prisoner and the machine intact. Later, he encountered two enemy scouts and a two-seater. The scouts fled, and after a prolonged fight, he shot down and crashed the two-seater, both occupants being killed. He has given repeated examples of skill, determination and pluck, and has accounted for 10 enemy machines. (M.C. gazetted March 26th, 1918. Bar to M.C. gazetted June 22nd, 1918.)

Lieut. (T./Capt.) **JOHN GILMOUR, D.S.O., M.C., A. and S. Highrs. and R.A.F.**—For conspicuous gallantry and devotion to duty in his leadership of offensive patrols. This officer has lately successfully engaged seven enemy machines, destroying five and shooting down two out of control. He has done splendid service. (M.C. gazetted May 26th, 1917. 1st Bar gazetted July 26th, 1918.)

Awarded a Bar to the Military Cross.

T./Lieut. (T./Capt.) **JOHN WILLIAM ALDRED, M.C., R.A.F.**—For conspicuous gallantry and devotion to duty whilst taking part in offensive patrols. During recent operations he destroyed four enemy aircraft and drove down three others out of control. He also did much successful low bombing and firing at low targets. He did splendid service. (M.C. gazetted March 26th, 1917.)

Lieut. (T./Capt.) **ALFRED CLAYBURN ATKEY, M.C., R.A.F.**—For conspicuous gallantry and devotion to duty. During recent operations he destroyed seven enemy machines. When engaged with enemy aircraft, often far superior in numbers, he proved himself a brilliant fighting pilot, and displayed dash and gallantry of a high order. (M.C. gazetted June 22nd, 1918.)

T./2nd Lieut. (T./Capt.) **ANDREW WEATHERBY BEAUCHAMP PROCTOR, M.C., Gen. List, attd. R.A.F.**—For conspicuous gallantry and devotion to duty while leading offensive patrols. He has lately destroyed three enemy machines, driven down one other completely out of control, and carried out valuable work in attacking enemy troops and transports on the ground from low altitudes. He has done splendid service. (M.C. gazetted June 22nd, 1918.)

Lieut. (T./Capt.) **JAMES DACRES BELGRAVE, M.C., Ox. and Bucks. L.I., attd. R.A.F.**—For conspicuous gallantry and devotion to duty whilst leading offensive patrols. In four days he destroyed two enemy machines and drove down four others. The odds were heavy against him, and he did magnificent work. (M.C. gazetted July 18th, 1917.)

Lieut. **GERALD ALFRED BIRKS, M.C., R.A.F.**—For conspicuous gallantry and devotion to duty in destroying four enemy aeroplanes, two of which were destroyed in one fight. (M.C. gazetted in this Gazette.)

T./Capt. **PETER CARPENTER, M.C., Gen. List and R.F.C.**—For conspicuous gallantry and devotion to duty. He led an offensive patrol against seven of the enemy; three were destroyed. Again he led a patrol of three machines against six of the enemy; two of them were destroyed and one driven down out of control. Latter, with two other pilots he engaged 12 hostile machines, of which three were destroyed and one driven down out of control. He shot down several machines himself. (M.C. gazetted March 4th, 1918.)

Lieut. **RALPH ST. JOHN DIX, M.C., Lond. R., and R.A.F.**—For conspicuous gallantry and devotion to duty in co-operation with artillery and reconnaissance at low altitudes. While on contact patrol, he observed two hostile T.M.'s in action, and getting no reply from the artillery, he dived at them, silencing both after firing about 200 rounds. Later, he drove off two hostile two-seaters. After this he was wounded in the arm, attacking a T.M. battery, but got safely back to his aerodrome, making an excellent report before being taken to the casualty clearing station. His energy and courage inspired his flight to a firm sense of duty. (M.C. gazetted June 22nd, 1918.)

Lieut. (T./Capt.) **ROBERT ARTHUR GROSVENOR, M.C., Dgn. Gds. and R.A.F.**—For conspicuous gallantry and devotion to duty in attacking enemy aircraft. He has lately destroyed two machines and driven down four others out of control. He has shown brilliant leadership and dash against heavy odds. (M.C. gazetted July 26th, 1918.)

T./Sec. Lieut. (T./Capt.) **DONALD RODRICK MACLAREN, M.C., Gen. List, R.A.F.**—For conspicuous gallantry and devotion to duty as a fighting pilot. He has recently destroyed no less than nine enemy machines, and proved himself a brilliant fighting pilot against enemy aircraft often far superior

in number. He has done magnificent service, and set a splendid example to his patrol. (M.C. gazetted June 22nd, 1918.)

T./Sec. Lieut. **RONALD TURNBULL MARK, M.C., Gen. List, and R.A.F.**—For conspicuous gallantry and devotion to duty. This officer and another pilot were escorting a formation of machines engaged on bombing a village, when seven enemy scouts attacked the bombers. They both attacked these scouts, but at the outset the other pilot's machine was set on fire, and Sec. Lieut. Mark's right-hand top plane broke. During the fight that ensued each came to the rescue of the other. Sec. Lieut. Mark first caused the other pilot's pursuer to break off his attack, and then the other pilot shot down the scout attacking Sec. Lieut. Mark. The action of both these officers, in practically unmanœuvrable machines, in coming to the rescue of each other in turn showed courage and self-sacrifice of a very high order. (M.C. gazetted June 22nd, 1918.)

Lieut. **TOM CECIL NOEL, M.C., K.O.S.B., S.R., attd. R.A.F.**—For conspicuous gallantry and devotion to duty. In four days he and his pilot destroyed seven enemy machines and drove down three out of control. His courage and skill are of the first order, and of inestimable value to his squadron. (M.C. gazetted September 26th, 1917.)

T./Sec. Lieut. **ARTHUR BARLOW WHITESIDE, M.C., R.A.F.**—For conspicuous gallantry and devotion to duty. This officer has taken part in over 50 night bombing raids, many of which, carried out at heights considerably under 1,000 ft., and in adverse weather conditions, were only successful through the skill and energy displayed by him in discovering and attacking his objective. On one night in particular, after having successfully bombed a large ammunition dump, which was set on fire and blown up, he proceeded to drop bombs on a town which held large numbers of the enemy, also firing from a low altitude with his machine gun on the roads leading to it. Returning to his squadron he obtained more bombs and ammunition, and with the same observer proceeded to drop bombs on a train behind the enemy's lines. On several occasions his machine was badly knocked about by enemy fire from the ground. The devotion to duty and disregard of danger displayed by this officer have been admirable examples to all members of his squadron. (M.C. gazetted March 26th, 1918.)

Lieut. **WILLIAM JAMES ARTHUR DUNCAN, M.C., Can. R.T.D. Sec., R.A.F.**—For conspicuous gallantry and devotion to duty. This officer sighted 15 enemy scouts attacking eight of ours and immediately joined in, destroying one enemy aeroplane, which fell with a wing off. He then attacked and drove down three other machines, maintaining the fight until the eight had got back to their lines. He has also, with another officer, destroyed an Albatross scout, which he followed down to a height of 200 ft., in spite of heavy machine-gun fire from the ground. (M.C. gazetted July 26th, 1918.)

Awarded the Military Cross.

T./Lieut. **CHARLES HENRY ARNISON, Gen. List, attd. R.A.F.**—For conspicuous gallantry and devotion to duty. He has destroyed four enemy aircraft and driven down four others completely out of control. He has always shown the greatest skill, keenness and gallantry, and has been largely instrumental in the fine achievements of his squadron.

T./Capt. **HILLIARD BROOKE BELL, R.A.F.**—For conspicuous gallantry and devotion to duty. He destroyed five enemy machines and drove down one out of control. He is a very fine patrol leader and an excellent officer. His work is thoroughly good, all round.

Lieut. **GERALD ALFRED BIRKS, R.A.F.**—For conspicuous gallantry and devotion to duty in destroying six enemy aeroplanes, two of which fell on our side of the lines.

T./Sec. Lieut. (T./Capt.) **ORLANDS CLIVE BRIDGEMAN, Gen. List, attd. R.A.F.**—For conspicuous gallantry and devotion to duty. The patrol he was leading was attacked by 20 or 30 enemy aeroplanes, of which he destroyed two himself, and by skilful manœuvring enabled two others to be "crashed" by officers of his patrol. His tactics and gallantry undoubtedly prevented what might have been a severe reverse to his patrol. On many occasions his work in attacking troops and other ground targets from low altitudes has been excellent, and his example and skilful leadership have been of great value to his squadron.

T./Lieut. **GEORGE WILLIAM BULMER, Gen. List, and R.A.F.**—For conspicuous gallantry and devotion to duty as a fighting pilot. In recent operations he destroyed seven enemy machines and an observation balloon. By his tenacity and zeal he set a magnificent example in his squadron.

Lieut. **FREDERICK WILLIAM BURDICK, A. Cyc. Corps, attd. R.A.F.**—For conspicuous gallantry and devotion to duty.

This officer has carried out several contact patrols and brought in accurate information, and has bombed and machine-gunned enemy troops from a low altitude, under bad weather conditions. He has also carried out many successful flights, and on one occasion landed his machine after a direct hit from a shell.

T. Sec. Lieut. (T. Capt.) PHILLIP SCOTT BURGE, M.M., Gen. List, and R.A.F.—For conspicuous gallantry and devotion to duty. This officer is a brilliant fighting pilot, and has destroyed six enemy aeroplanes. His dash and determination when engaged in combat with the enemy, often numerically superior, have set a fine example to the remainder of his formation.

T. Sec. Lieut. (T. Capt.) BASIL EVERARD CATCHPOLE, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty. This officer has been observing for artillery during the last eight months, often flying at low altitudes over the enemy lines under heavy anti-aircraft and machine-gun fire. The following is three consecutive days' work:—(1) While on patrol, flying at 400 ft., he fired 900 rounds under intense anti-aircraft and machine-gun fire; (2) carried out two very successful shoots, observing on hostile batteries, dropped four bombs, and saw several large explosions, also fired 800 rounds into farms, orchards and trenches; (3) left the ground in the dark on artillery patrol and located accurately 20 hostile batteries. In the afternoon he did four good shoots in two flights, causing explosions in every case. He flew for eight hours this day. He has always set a splendid example in his squadron.

T. Capt. LEWIS ISAAC COLLINS, York. R. and R.A.F.—For conspicuous gallantry and devotion to duty. He has carried out 12 successful bombing raids, 15 low bombing and reconnaissance flights, and 10 successful photographic flights. He has carried out many low flying, harassing and bombing patrols of great value. In addition he has destroyed two enemy machines, on one occasion being attacked by three of the enemy.

Lieut. HAROLD ROSS EYCOTT-MARTIN, R.E., R.A.F.—For conspicuous gallantry and devotion to duty. In a patrol with two other machines he attacked 19 of the enemy. Of the six enemy aircraft destroyed on this occasion he destroyed two. On two other occasions he destroyed an enemy machine.

Sec. Lieut. CHARLES GEORGE GASS, Lond. R., attd. R.A.F.—For conspicuous gallantry and devotion to duty. During many engagements, generally against heavy odds, he destroyed five enemy aircraft. He showed great ability and an entire disregard for personal danger.

T. Capt. GEORGE EVERARD GIBBONS, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty. He has lately destroyed three enemy machines and driven down others out of control. He has always shown great gallantry and keenness, and has commanded his flight with distinction, performing invaluable services in training young officers in the squadron.

T. Lieut. HERBERT RUSKA GOULD, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty. He has carried out 24 successful bombing raids, several of which he has led, and 26 low reconnaissances and bombing flights, as well as many low-flying, harassing and bombing patrols, during which many direct hits have been obtained and severe casualties inflicted. He has destroyed three enemy machines and has shown a very high spirit of zeal throughout.

T. Lieut. CHARLES PHILIP HARRISON, R.E., attd. R.A.F.—For conspicuous gallantry and devotion to duty. This officer was acting as observer when his pilot was severely wounded. He opened fire and shot down the enemy aeroplane, which fell in flames. He then took control of his own machine, which was very badly damaged, his pilot being "hors de combat," and notwithstanding complete inexperience in piloting a machine he managed to bring it safely back to an aerodrome. His skill and courage undoubtedly saved his pilot's life, and prevented the machine from falling into the hands of the enemy.

T. Sec. Lieut. HERBERT GEORGE HEGARTY, R.A.F.—For conspicuous gallantry and devotion to duty on offensive patrols. During recent operations he destroyed four enemy machines and drove down two. He is a bold and fearless pilot, and has done splendid work.

Sec. Lieut. ERNEST FORD HOWARD, R.A., and R.A.F.—For conspicuous gallantry and devotion to duty. This officer has taken part in 52 night bombing raids, showing at all times the greatest skill and perseverance in finding his objective. On one occasion, in particular, after having successfully bombed a large ammunition dump which was set on fire and blown up, he proceeded to drop bombs on a town which held large numbers of the enemy, also firing from a low altitude with his machine gun on the roads lead-

ing to it. Returning to his squadron he obtained more bombs and ammunition, and, with the same observer, proceeded to drop bombs on a train behind the enemy's lines. On many occasions his machine was badly damaged by enemy fire from the ground. He has set a fine example of devotion to duty and entire disregard of danger to the other members of the squadron.

Lieut. CEDRIC ERNEST HOWELL, R.A.F., S.R.—For conspicuous gallantry and devotion to duty. He bombed an electrical power-house with great skill, obtaining three direct hits from 100 ft. With two other machines he carried out a most dashing attack on a formation of 12 enemy aeroplanes. Although badly hampered by frequent jams in both of his machine guns, he destroyed three and drove down one out of control. He is a most successful and gallant patrol leader and has destroyed six enemy aeroplanes and shot down one out of control.

T. Lieut. HAROLD BYRN HUDSON, R.A.F.—For conspicuous gallantry and devotion to duty in destroying four enemy aeroplanes and shooting down two enemy kite balloons in flames.

T. Capt. FRANK HYDE, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty. He carried out many successful shoots and did valuable reconnaissance work, frequently under heavy anti-aircraft and machine-gun fire and adverse weather conditions. As a flight commander his work was splendid, and he set an example of cheerfulness and efficiency to all officers in the squadron.

Lieut. (T. Capt.) MONTAGUE RIGHTON NEVILL JENNINGS, R.A.F., S.R.—For conspicuous gallantry and devotion to duty. He has carried out many low-flying patrols and reconnaissances, engaging troops, transport, &c., with machine-gun fire. On one occasion he engaged and silenced a machine gun battery; on other occasions he personally completely destroyed three enemy machines.

T. Lieut. JAMES IRA THOMAS JONES, M.M., R.A.F.—For conspicuous gallantry and devotion to duty. This officer, one of an offensive patrol, engaged and shot down in flames a two-seater, which fell to earth. Ten days later, on offensive patrol, he shot down a Hanover two-seater, which crashed. The next day, when patrolling, he pursued, overtook and shot down an Albatross two-seater. During the same flight he met a Halberstadt two-seater and killed the observer, who either jumped or fell overboard, but had to break off as his ammunition was finished. The next day he shot a balloon down in flames. Three days later he got a good burst with both guns on a Pfalz scout, both wings coming off. He has driven two others down out of control.

Lieut. ARTHUR STUART KEEP, Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty on long-distance bombing raids. He showed great skill and determination while raiding enemy towns. One day, with his oil-feed pipe broken, he reached his objective, and disposed of an enemy machine on the way back. His work was splendid.

T. Lieut. CHARLES LEY KING, R.A.F.—For conspicuous gallantry and devotion to duty when working with artillery in carrying out 13 successful shoots, by which numerous enemy gun pits were destroyed and fires and explosions caused. He also carried out two very good long reconnaissances, taking excellent photographs and obtaining valuable information.

T. Lieut. DENNIS LATIMER, R.A.F.—For conspicuous gallantry and devotion to duty on offensive patrol. He and his observer in four days' fighting destroyed seven enemy machines and drove down three. They did magnificent service.

T. Sec. Lieut. ALFRED ALEXANDER LEITCH, Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty while on fighting patrols. During recent operations he displayed great courage and determination in attacking superior forces of enemy aircraft, and in engaging with machine-gun fire enemy troops and transport on the ground. He did splendid work, and set a most inspiring example.

T. Sec. Lieut. BRYANT LUTELLUS LINDLEY, Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty during recent operations. He carried out several very successful long-distance reconnaissances and bomb raids under adverse weather conditions, and during low-bombing and machine-gun actions he did most brilliant work. Throughout he showed great gallantry and skill.

T. Capt. CYRIL NELSON LOWE, Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty. This officer and another pilot were escorting a formation of machines engaged on a bombing raid when seven enemy scouts attacked the bombers. They both attacked these scouts, but at the outset this officer's machine was set on fire, and the other pilot's right hand top plane broke. During the fight that

ensued each came to the rescue of the other. The other pilot first caused Capt. Lowe's pursuer to break off his attack, and then Capt. Lowe shot down the scout attacking his comrade. The action of both these officers, in practically unmanœuvrable machines, in coming to the rescue of each other in turn, showed courage and self-sacrifice of a very high order.

Lieut. (T. Capt.) THOMAS CLELLAND LOWE, R.E. and R.A.F.—For conspicuous gallantry and devotion to duty in carrying out numerous successful reconnaissances and taking a large number of successful photographs, on several occasions driving off enemy aircraft. He has repeatedly carried out long reconnaissances, showing great determination in overcoming difficulties and completing his duty. When attacked by seven enemy aeroplanes he and his observer engaged them and drove one down out of control.

Lieut. LESLIE JOHN MANN, A.S.C., attd. R.A.F.—For conspicuous gallantry and devotion to duty in skilfully bombing enemy munition and supply depots, in spite of heavy shell and machine-gun fire, which had seriously damaged his plane. On many occasions he has set a fine example of courage, especially on one, when he endeavoured to assist the occupants of an aeroplane which had been brought down in the enemy's lines.

Lieut. (T. Capt.) FREDERICK WILLIAM MATHIAS, R.A.F.—For conspicuous gallantry and devotion to duty. He carried out several successful shoots, doing considerable damage. He took a large number of successful photographs, and completed several long reconnaissances, obtaining valuable information.

T. Sec. Lieut. FREDERICK MCCHESENEY, R.A.F.—For conspicuous gallantry and devotion to duty. He succeeded in getting valuable photographs of the enemy system, his machine being damaged by machine-gun fire from the trenches. On six occasions he carried out low reconnaissance flights, bringing back valuable information, though his machine was badly damaged by machine-gun fire from the ground.

Lieut. IAN DONALD ROY McDONALD, R.A.F.—For conspicuous gallantry and devotion to duty. With seven scouts he attacked 18 enemy machines, of which three were destroyed and one driven down completely out of control. When driven down to within 200 ft. of the ground by two enemy machines owing to a choked engine, he turned on them and drove one down. He has in all destroyed 11 enemy aircraft and carried out valuable work in attacking enemy troops on the ground.

Lieut. ALAN FLEMING MCGLASHAN, R.A.F.—For conspicuous gallantry and devotion to duty on contact patrol, reconnaissance, day and night bombing, and in aerial fighting, especially in dropping 18 bombs on a village from only 900 ft. owing to bad weather, six days' excellent photographic work during heavy fighting, frequent contact patrols resulting in good information, and also firing many rounds at the infantry on the ground from low altitude. His work and example for 10 months have been splendid.

T. Sec. Lieut. HENRY MICHAEL MOODY, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty in leading patrols. He has destroyed four enemy aircraft and shot down three out of control. He has further carried out very successfully a number of low-flying patrols, photographic reconnaissances and escorts, and has on all occasions shown a very fine spirit of dash and determination.

Capt. IAN PATRICK ROBERT NAPIER, Arg. and Suth'd. Highrs. and R.A.F.—For conspicuous gallantry and devotion to duty. This officer has carried out many reconnaissances, and flying at low altitudes has engaged massed enemy troops with bombs and machine-gun fire, inflicting heavy casualties. He has brought down seven enemy machines.

T. Capt. KENETH RUSSEL NAPIER, R.A.F.—For conspicuous gallantry and devotion to duty during recent operations. He carried out several successful reconnaissances under heavy machine-gun fire from the ground, dropping bombs on troops and machine-gunning them, while attacked himself by enemy aircraft. Under very trying weather conditions he has brought back most valuable information. He did very fine work.

Sec. Lieut. KENNETH WILLIE PAYNE, R.A.F., Spec. Res.—For conspicuous gallantry and devotion to duty. This officer has shown great skill in carrying out night bombing raids on back areas under adverse weather conditions. On one occasion observing a train in motion 50 miles behind the enemy lines, he descended to within about 800 ft. of the ground and dropped a bomb, obtaining a direct hit; he then dropped three bombs on a brilliantly lighted building with good effect. After this he returned to the train, which

his observer attacked with machine-gun fire. On another occasion, when on a bombing raid, his machine caught fire, but with great coolness he brought it safely to earth. He has taken part in over thirty raids, always showing great determination in reaching his objectives.

T. Sec. Lieut. ERNEST FREDERIC PEACOCK, Gen. List, R.A.F.—For conspicuous gallantry and devotion to duty while on fighting patrols. He showed great determination and courage in attacking superior numbers of enemy aircraft, and carried out fine work in engaging enemy troops and transport on the ground with machine-gun fire.

T. Sec. Lieut. GEORGE RABY RILEY, R.A.F.—For conspicuous gallantry and devotion to duty. He obtained four direct hits on a long line of enemy transport, and afterwards caused havoc among them with his machine gun. Several times he attacked troops and transport from low altitudes; also he brought down one enemy machine and drove another out of control.

T. Sec. Lieut. HUGH WILLIAM LUMSDEN SAUNDERS, M.M., Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty. During recent operations he destroyed five enemy machines and shot down four out of control. He showed great courage and skill in engaging enemy aircraft, and did splendid service.

Lt. (T. Capt.) STANLEY STANGER, R.A.F.—For conspicuous gallantry and devotion to duty in destroying six enemy aeroplanes. He did splendid service.

T. Sec. Lieut. CHARLES ANTHONY SUNDY, S. Wales Bord. and R.A.F.—For conspicuous gallantry and devotion to duty during recent operations. When attacked by seven enemy aircraft, he opened fire and sent one to the ground. He showed great brilliance at long-distance photography and reconnaissance, and located a number of new hostile aerodromes and brought back much valuable information. He carried out his work with remarkable coolness and determination.

Lt. FRANCIS STANLEY SYMONDSON, Yeo. and R.A.F.—For conspicuous gallantry and devotion to duty. In two months he destroyed five enemy machines and one enemy kite balloon.

T. Lieut. SAMUEL FREDERICK HENRY THOMPSON, Gen. List, R.A.F.—For conspicuous gallantry and devotion to duty as a fighting pilot. During recent operations he destroyed five enemy machines. He showed great courage and skill, and by his keenness and dash set a fine example to all.

T. Lieut. WILLIAM MACKENZIE THOMSON, R.A.F.—For conspicuous gallantry and devotion to duty on offensive patrols. In five days he destroyed as many enemy machines. He showed fine determination to close with the enemy, and set a splendid example of enterprise and gallantry.

Sec. Lieut. (T. Capt.) JOHN TODD, R.A.F.—For conspicuous gallantry and devotion to duty. During recent operations he destroyed three enemy aircraft, forced one to land in our lines, and drove four down out of control. He did very fine work.

T. Sec. Lieut. WALTER ALEXANDER TYRRELL, Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty. On one day this officer attacked two enemy triplanes, destroying one and driving down the other out of control. After this he was attacked by two other machines, one of which he forced to land, taking the occupants prisoners. On various other occasions he has destroyed or driven down out of control enemy machines.

Sec. Lieut. JOHN HOWARD UMNEY, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty. During recent operations he destroyed five enemy machines. By his untiring energy and keenness, both in the air and on the ground, he set a splendid example to other observers in the squadron, and greatly helped his pilot in successful encounters.

T. Sec. Lieut. HENRY EDWARD WALKER, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty during many flights and encounters in the air when, often single-handed, he was most successful in bringing down enemy machines, and invariably displayed the utmost skill and resolution. He has been engaged in 14 combats, which have either been decisive or have resulted in enemy aircraft being driven down to a low height, and he has on occasions gone up as many as five times in one day.

T. Sec. Lieut. STANLEY HARRY WALLAGE, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty during recent operations. He personally destroyed seven enemy machines. He showed a fine spirit of dash and tenacity, and his skill and success as a fighting pilot was a fine example to others in his squadron.

T. Capt. ALBERT GREGORY WALLER, Gen. List and R.A.F.—For conspicuous gallantry and devotion to duty. He has

led 15 successful bombing raids, 22 low-bombing and reconnaissance flights and eight successful photographic flights. In addition, he has destroyed five enemy machines. As a Flight-Commander he has shown initiative and enterprise both in the air and on the ground, and the excellent work done by the flight under his command is entirely due to his fine example and untiring energy.

Lieut. HUGH SIDNEY PORTER WALMSLEY, N. Lan. R. and R.A.F.—For conspicuous gallantry and devotion to duty on long-distance bomb raids. In four of these he acted as leader, and displayed great skill and tenacity in getting the better of the enemy. He has carried out 12 raids into the enemy's country, and his work throughout has been consistently of a high order.

Lieut. (T. Capt.) FREDERICK WILLIAMS, R.A.F., Spec. Res.—For conspicuous gallantry and devotion to duty during recent operations. He took part in a number of long-distance raids and photographic reconnaissances, showing great gallantry and skill under difficult conditions. He destroyed three enemy aircraft and drove down two out of control. Throughout he showed great keenness and determination.

T. Sec. Lieut. THOMAS FREDERIC WILLIAMS, Gen. List and R.F.C.—For conspicuous gallantry and devotion to duty. He destroyed four enemy aircraft and drove down one. Also, in conjunction with another officer, he was instrumental in forcing an enemy machine to surrender and land.

T. Sec. Lieut. THOMAS MELLING WILLIAMS, Gen. List, attd. R.A.F.—For conspicuous gallantry and devotion to duty. During recent operations he destroyed three enemy aircraft and drove down two out of control. He showed great skill and courage in his attacks, and set a fine example to all.

Lieut. (T. Capt.) PERCY WILSON, R.A.F.—For conspicuous gallantry and devotion to duty in destroying six enemy aeroplanes and driving down three more out of control. He also destroyed an enemy balloon, which fell in flames.

Lieut. HUBERT LEE HOLLAND, Can. Cyc. Coy., sec'd. to R.A.F.—For conspicuous gallantry and devotion to duty when working with artillery in carrying out six successful shoots whereby many enemy gun pits were destroyed and explosions caused. In one case he descended to 100 ft. and found all pits totally destroyed. He carried out a good low reconnaissance of two suspected hostile batteries and also obtained other very useful information.

Lieut. CLIFFORD McEWEN, Can. Inf., sec'd. to R.A.F.—For conspicuous gallantry and devotion to duty in destroying six enemy aeroplanes. A most gallant pilot and patrol leader.

Lieut. EDWARD LAUNCE O'LEARY, Can. Field Art., attd. R.A.F.—For conspicuous gallantry and devotion to duty. When on bombing duty he successfully drove off three enemy

aeroplanes, and when on escort duty and attacked by six enemy aeroplanes, he brought down one out of control. He made 12 successful reconnaissance flights during a fortnight of bad weather conditions at low altitude, his machine being hit in many places.

Capt. JOHN ROBERTSON DUIGAN, Aust. F.C.—For conspicuous gallantry and devotion to duty. While on reconnaissance he was attacked by four enemy scouts. Although wounded he manoeuvred his machine with great skill, his observer using the rear machine gun, with the result that one scout was shot down out of control. The three others continued the attack, eventually setting fire to his tail plane; after which he landed behind the front line, helped to remove the observer, who had been wounded five times, and saved the photographic plates in spite of being wounded three times himself.

Capt. ERNEST JAMES JONES, D.F.C., Aust. F.C.—For conspicuous gallantry and devotion to duty. While co-operating with artillery he was attacked by three triplanes. He was wounded and the controls of his machine damaged. He out-maneuvred the enemy, reported his observation to his battery by wireless, and returned to his aerodrome. On landing, owing to the damage to his machine, he crashed, but although much weakened by loss of blood, extricated his observer from the wreckage. On another occasion while on photography he was attacked by six triplanes. One of these his observer shot down out of control, while the remainder were forced to withdraw. He then continued his work. At all times he has set a very fine example of courage and determination.

Foreign Decorations.

It was announced in a supplement to the *London Gazette* on September 14th that the following decorations have been conferred by the Allied Powers on officers and men of the British Naval Forces for distinguished services rendered during the war:—

CONFERRED BY THE PRESIDENT OF THE FRENCH REPUBLIC.

Legion of Honour—Chevalier.

Squad. Comdr. E. M. Moon, D.S.O., R.N.A.S. (now Maj., R.A.F.).

CONFERRED BY THE KING OF THE BELGIANS.

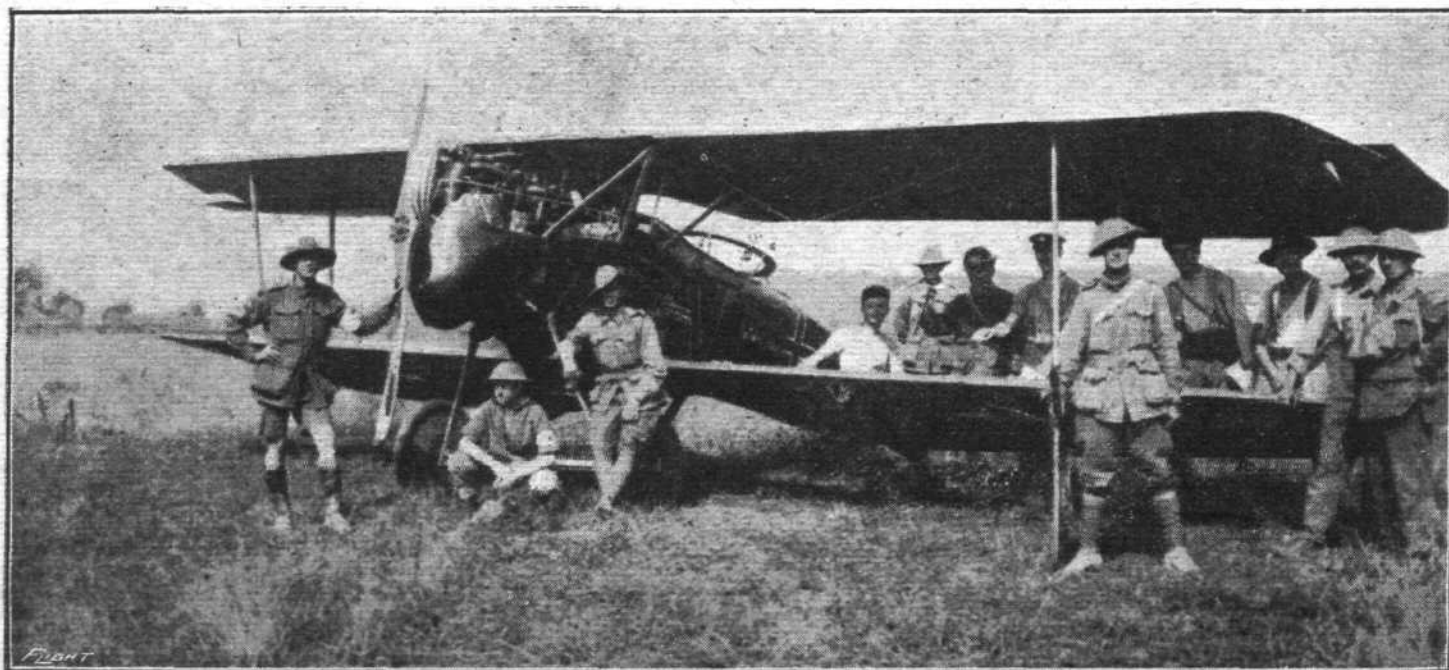
Croix de Guerre.

Flt. Comdr. R. B. Munday, R.N.A.S. (now Maj., R.A.F.).

CONFERRED BY THE KING OF THE HELLENES.

Order of the Redeemer—Commander.

Maj. (Temp. Lieut.-Col.) R. Gordon, D.S.O., R.M.L.I. (now Temp. Col., R.A.F.) (The Appointment as Officer of this Order gazetted on June 26th has been cancelled.)



(Australian official.)

ON THE BRITISH WESTERN FRONT IN FRANCE.—Winged by Australians on the Western Front. A German bombing and reconnaissance machine brought down by a machine gunner. It reminds us very much of the Halberstadt 2-seater illustrated in our issue of August 1st.

THE FRENCH A.R. BIPLANE, WITH 190 H.P. RENAULT MOTOR.

[The following illustrated description of the French "A.R." machine has been translated from a German contemporary, and should be of considerable interest, inasmuch as one is not permitted to refer in detail to the modern aeroplanes of the Allies until the enemy has issued a report.—ED.]

THIS machine, designed by Dorand, is designated as A.R., or A.L.D., according to whether it is fitted with a Renault or with a Lorraine-Dietrich engine. The particular machine under review is marked A.R., Type 1, and the number is 309. The machine is a two-strutter biplane of 13.30 m. span, and has its fuselage supported between the planes on ash struts. Sweep-back and dihedral angle are only present in the lower plane. The former amounts to 1 deg., while the dihedral angle is 2 deg. The top plane is staggered backwards 0.5 m. The gap is 1.825 and 2 m. respectively, that is to say in the centre it is 0.945 of the chord. The angle of incidence of the upper plane is 2.5 deg., that of the lower plane 3 deg.

The halves of the wings are screwed together in the centre of the machine. The wing spars appear to be of I section, covered on both sides with three-ply. Between every two ribs, whose spacing is 300 to 340 mm., is a short false rib on the top surface only, running from the leading edge to the front spar. The wing fabric, which is of a cream colour, is sewn to the ribs. In front of the trailing edge, which is formed by a wire, as in all French machines, eyelets are incorporated.

The plane struts, which, with the exception of those secured to the body, are of hollow section, are of stream-line form. In order to prevent lateral bending the outer plane-struts are provided with a peculiar bracing. In addition the middle of the struts are braced to one another and to the bottom of the body struts. (See illustrations.) The strut fittings are of a very simple type, as shown in one of the illustrations. Strut sockets of sheet steel are secured to the spars by U bolts, the two shanks of which pass through the spar and are secured by nuts on the other side. The flying wires and landing wires are anchored to the corners of these U bolts, while the incidence wires are secured to lugs projecting from and forming part of the steel plate bottom of the strut sockets. This bottom is simply resting inside the socket and is not secured in any other way.

The wing bracing consists of solid wires throughout, which are connected to the fittings and turnbuckles in the usual way by bending them over and sliding a ferrule of spiral wire over the free end. The flying wires are in duplicate and lie one behind the other. The space between them is filled with a strip of wood. The external drift wire running to the nose of the body is wrapped with thin cord to prevent it becoming entangled in the propeller in case of breakage. Between the fuselage and the lower plane there is diagonal bracing in the plane of each spar. As, however, there is no corresponding bracing above the fuselage, the upper ends of the top plane body struts are allowed a considerable amount of play.

Non-balanced ailerons, positively operated, are hinged direct to the rear spar of the top plane only. The aileron control cables are in the form of simple cables running from the sprocket wheel on the control column, around pulleys in the lower plane, along the lower side of the lower plane and under another pair of pulleys. From this point on they are in the form of solid wires of 2 mm. diameter running to the aileron crank levers, which are in the form of quadrants. The upper cranks of the ailerons are connected by cables and wires running across from side to side, along the upper surface of the top plane.

At the stern of the fuselage is fixed a small tail plane to which is pivotted the balanced trapezoidal elevator. The rudder is also balanced. The rudder post is braced to the elevator, and this in turn to the body, by stream-line steel tube struts. The ends of these struts are flattened out and bolted to the various fittings. There is no vertical fin. The rudder is controlled by plain wires of 2.5 mm. diameter. Only where they pass over pulleys have cables been substituted for the wires.

The undercarriage struts are secured to the spars of the lower plane at the points where occur the attachments for the struts running to the body. The short body struts are braced by stream-line tubes fore and aft to the body. The one-piece axle rests between two cross struts of steel tube. The travel of the axle is not restricted. The undercarriage is braced diagonally in the plane of both pairs of struts.

The longerons and struts of the fuselage, which is fabric covered, are made of ash up to the observer's seat. From there they are made of spruce. The struts of the rear portion of the fuselage rest on the longerons without any attachment, and are held in place by the bracing only. To prevent them from sliding along the longerons the ends of the struts are

notched to correspond with the shape of the wiring lugs, which surround the longerons. (See illustration.)

The 8-cylinder, Vee type Renault motor develops, according to a plate in the pilot's cockpit, 190 h.p. at 1,550 to 1,600 r.p.m. The radiator is placed between the body and the lower plane. There is a shutter arrangement for varying the cooling. A water collector or tank is placed above the port row of cylinders. The exhaust gases are carried outwards to each side through short collectors. With the older motors the exhaust from both rows of cylinders was carried inwards to a common collector carrying it up above the top plane, an arrangement which greatly hampered the view of the pilot. In these machines the radiator was in the nose of the body. An auxiliary radiator was placed below the fuselage.

The motor is bolted to two channel section steel bearers, which rest on strong sheet steel cradles. Immediately behind the engine is placed transversely the oil tank, which has a capacity of 7 litres. The main petrol tank, which has a capacity of 170 litres, is divided into three compartments, and is placed behind the pilot's seat. From here the petrol is pumped into a small gravity tank holding 12 litres and placed behind the engine. For this is employed either a pump driven by the engine or a hand pump to the right of the pilot. If too much petrol is pumped through it is returned to the main tank via an overflow.

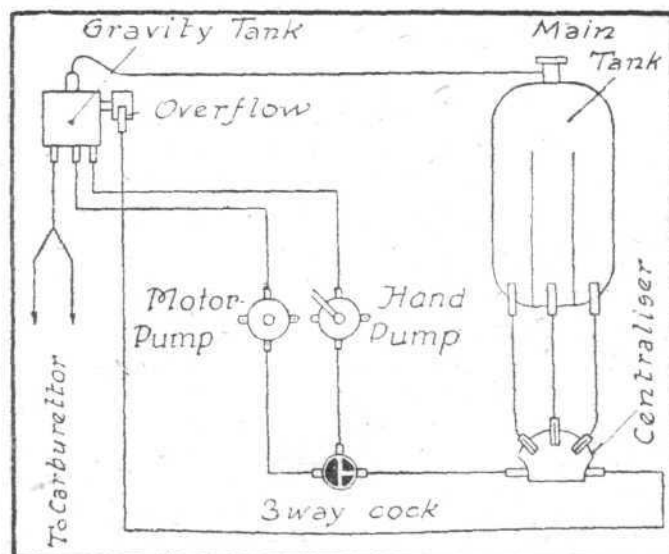
The pilot sits in a line with the leading edge of the top plane. Here he has a very good view forward, but the view in a rearward and upward direction is very restricted.

On the instrument board in front of the pilot are the following instruments: A cooling water thermometer, ignition control, compass, petrol cock and revolutions indicator. To the right, at the side of the seat, is the petrol hand pump with a three-way cock as well as the trimming gear for the elevator. On the left are the levers for advancing or retarding the ignition, the petrol and air levers, the radiator shutter control and the oil cock. In the floor of the fuselage, in front of the rudder bar, there are small windows.

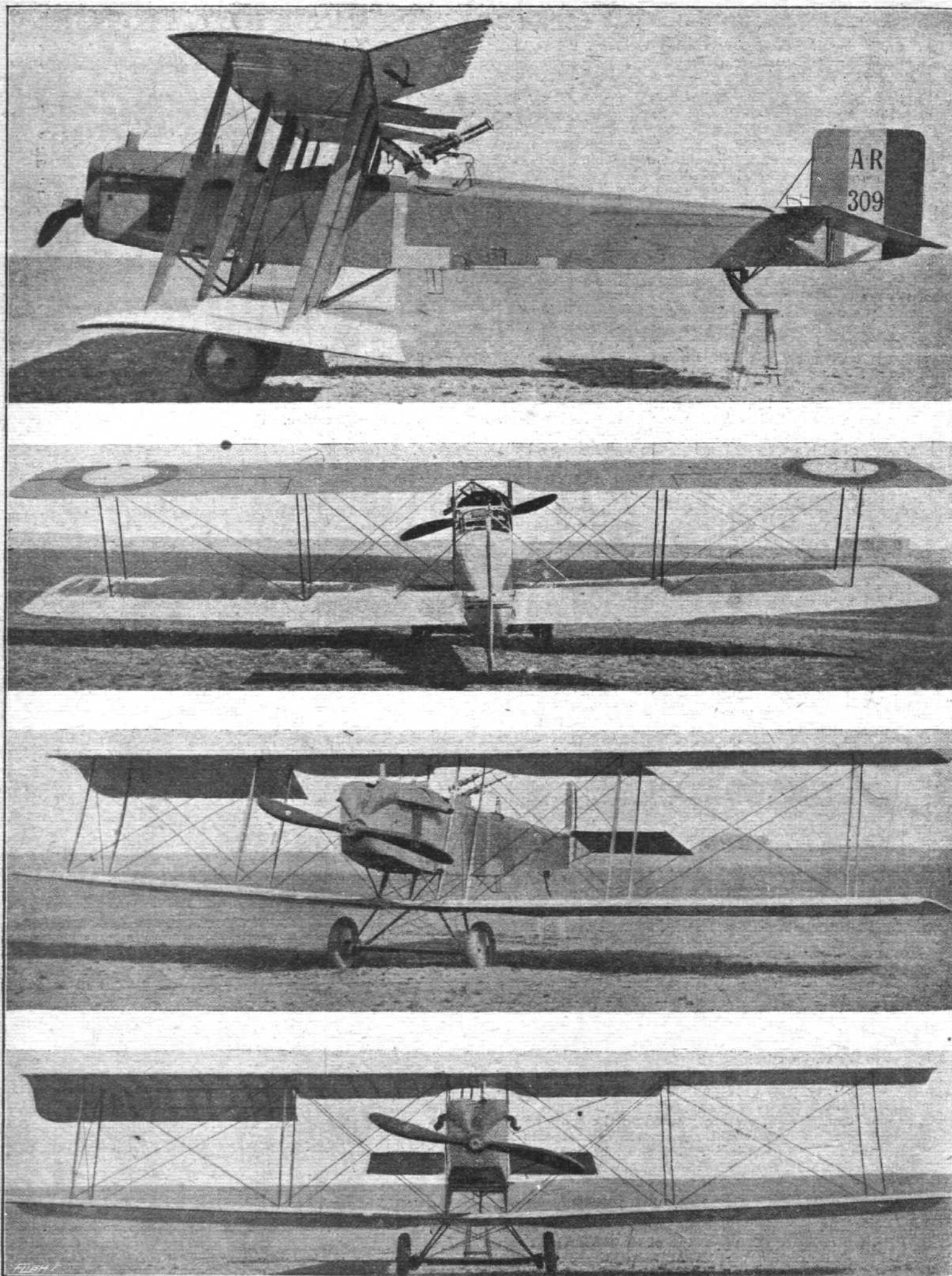
In the observer's cockpit there are two folding seats, one in front and one at the rear. In front, behind the petrol tank, there are on each side racks for four bombs. Between these racks, through an opening in the floor, the photographic camera can be inserted. A shelf for plate holders is placed behind the port bomb racks. On the starboard inner wall of the observer's seat are aluminium plates for the switches and keys of the wireless. The other instruments of the wireless are placed aft of the seat.

The pilot is armed with a fixed machine gun placed on the right hand side above the body, and is operated from the left cam shaft. Firing is accomplished by Bowden control from the control wheel. The observer has two movable machine guns, coupled together and mounted on a gun ring with elevating arrangements.

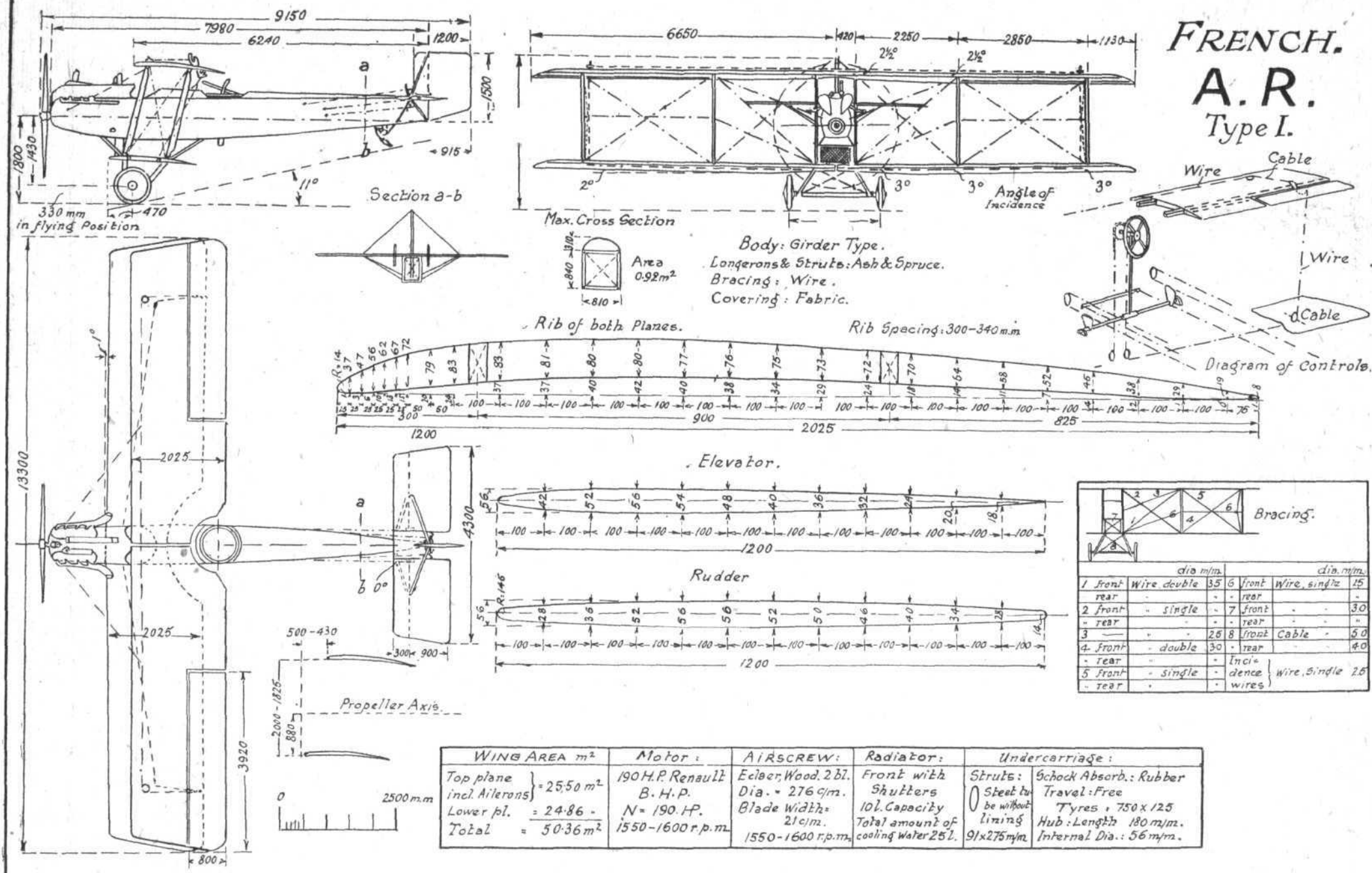
The weight of the machine, empty, was ascertained to be 890 kg. An inscription on the rudder states that the weight of the fuel (*poids combustible*) is 140 kg., and that the useful



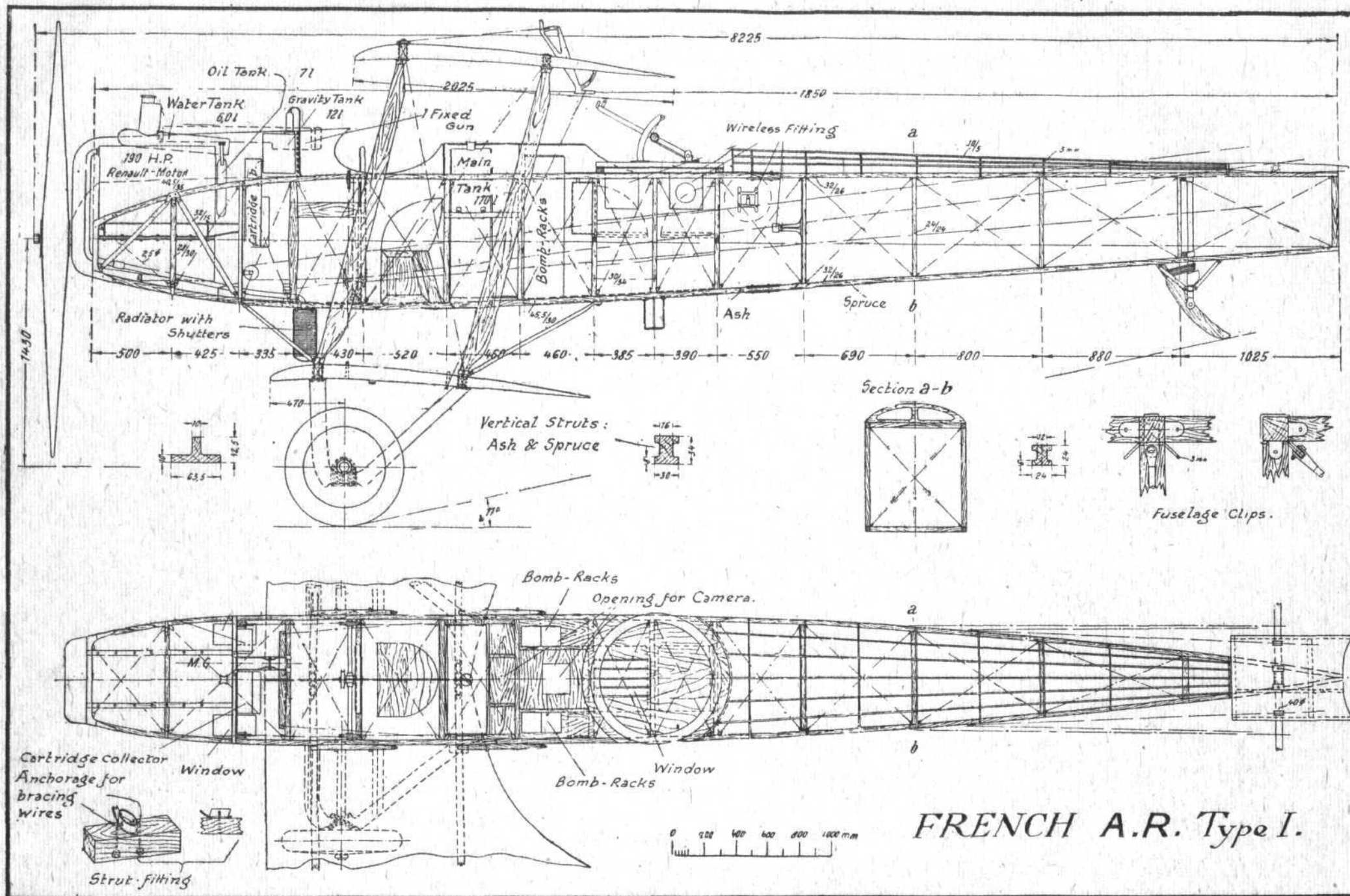
Petrol system of the A.R. biplane.



Four views of the French A.R. biplane.



General arrangement, and some details, of the French A.R. biplane.



Plan and elevation of the body of the French A.R. biplane.

load (*poids utile*) is 300 kg. This gives a total weight of 1,330 kg. As the area is 50.36 sq. m. the loading is 1,330 : 50.36 = 26.40 kg./sq. m. The loading per h.p. is 1,330 : 190.36 = 7.0 kg./h.p.

The chief aim of the designer appears to have been to provide a light machine with low wing loading. The construction of the details such as fittings, wiring, lugs, &c. has therefore been kept very light and simple.

Item weights.—Motor, 245 kg.; cooling water, 25 kg.

air screw, 22 kg.; one petrol main tank, 22.5 kg.; one petrol gravity tank, 2 kg.; one oil tank, 2 kg.; motor accessories, exhaust collector, body, &c., 244.5 kg.; under-carriage, 60 kg.; controls, 6 kg.; wings, 234.5 kg.; bracing, 26.5 kg.; weight empty, 890 kg.; total weight, 1,330 kg.

Loads.—Pilot and observer, 150 kg.; armament, 75 kg.; four bombs at 12 kg., 48 kg.; wireless and camera, 27 kg.; 182 litres petrol and 7 litres oil, 140 kg.; total, 440 kg.

Weight of wings.—4.65 kg./sq. m.

THE ROYAL AERO CLUB OF THE U.K.

OFFICIAL NOTICES TO MEMBERS.

SPECIAL COMMITTEE MEETING.

A SPECIAL Meeting of The Committee was held on Thursday last, the 12th inst., when there were present :—Brig.-Gen. Sir Capel Holden, K.C.B., F.R.S., in the Chair; Col. F. Lindsay Lloyd, C.M.G., Lieut.-Col. F. K. McClean, R.A.F., and Mr. J. H. Nicholson. Lieut.-Com. H. E. Perrin, R.N.V.R. (Secretary), and Lieut. H. S. Jacob, R.N.V.R. (Assistant Secretary) in attendance.

Election of Members.—The following New Members were elected :—

Geoffrey Ernest ffiske.
William Henry ffiske.
Capt. Alan Goodfellow, R.A.F.
Capt. Frederick Andrew Laughlin.
George Robert Neville Minchin.
Capt. Joseph Dawson Paul.
Lieut. Fortescue Willes Pridham, R.A.F.
Maj. John Thorpe Reckitt, A.S.C.
Lieut. Richmond Temple, R.A.F.
Capt. George Thom, R.A.F.

THE FLYING SERVICES FUND (Registered under the War Charities Act, 1916).

Honorary Treasurer:
The Right Hon. LORD KINNAIRD.

Committee:
Brig.-Gen. W. W. WARNER, R.A.F. (*Chairman*).
Mr. CHESTER FOX.
Lieut.-Col. HARCOURT G. GOLD, R.A.F.
Lieut.-Col. T. O'B. HUBBARD, M.C., R.A.F.
Lieut.-Col. C. E. MAUDE, R.A.F.

Secretary:

Lieut.-Com. H. E. PERRIN, R.N.V.R.

Bankers:

Messrs. BARCLAY'S BANK, LTD., 4, Pall Mall East,
London, S.W. 1.

Objects:

The Lords Commissioners of the Admiralty and the Army Council having signified their approval, THE ROYAL AERO CLUB has instituted and is administering this Fund for the benefit of Officers, Non-Commissioned Officers and Men of the Royal Air Forces who are incapacitated on active service, and for the widows and dependants of those who are killed.

Subscriptions.

	£	s.	d.
Total subscriptions received to Sept. 10th, 1918	13,014	0	11
Collected at B. Cannon and Co., Ltd. Works ..	1	0	0
Wireless Experimental Establishment, Royal Air Force, Biggin Hill	9	8	0
South-Western Area Recreational Training Association, Headquarters, Royal Air Force, Salisbury	57	6	0
Staff and Workers of Gwynes, Ltd. (Seventieth contribution)	9	7	6
Collected by R. K. Weekes	5	0	0
Part Collections at Rowde Church, Sunday, September 8th, 1918	1	5	0
Total, September 17th, 1918	13,097	7	5

Offices: THE ROYAL AERO CLUB,
3, CLIFFORD STREET, LONDON, W.1,
H. E. PERRIN, Secretary.

The Raid on Paris.

A *communiqué* issued in Paris on September 16th stated that "Several squadrons of enemy aeroplanes made for the Paris district in the small hours this morning. They were reported to be on the way, and were chased by our outposts. An intense barrage was put up, and other means of defence were also brought into action. Several bombs were dropped, and there were some victims. Among them was M. Antoine Troubat, Deputy Chief of the Quæstors of the Senate, who was killed. Some material damage was also done."

In the course of the raid two German bombing aeroplanes were brought down by the defence artillery. The *debris* of one machine, which was hit direct by a shell, fell near one of the northern suburbs—Gonesse. The bodies were found of an officer and two men constituting its crew. The second machine fell in the Forest of Compiègne.

The attack commenced at 1.30 a.m. and continued at intervals to 3 a.m. At 4 a.m. a second warning was given, but the raiders were beaten off. According to the *Matin* six people were killed and fifteen wounded. A women's hospital was hit and some of the patients were wounded.

The German *communiqué* of September 16th said :—"As a reprisal for the continued bombing of German towns 22 tons of bombs were dropped on Paris during last night by our bombing squadrons."

U.S. Air Ministry Proposed.

A CABLE message from Washington states that by eleven votes to two the Military Committee of the Senate on September 17th reported favourably on the Bill introduced by Senator New providing for a separate Department of Aeronautics.

Opening of the I.A.E. Session.

THE first meeting of the new session of the Institution of Automobile Engineers will be held on Wednesday, October 2nd, at the Royal Society of Arts, John Street, Adelphi, W.C., at

7.30 p.m., when Mr. A. A. Remington will deliver his presidential address. Cards of invitation can be obtained on application to the Secretary of the I.A.E. at 28, Victoria Street, S.W. 1.

Air Work in Palestine.

"DURING the past few weeks the air force in Palestine have destroyed 11 German machines and driven down six," says Mr. W. T. Massey in a message dated August 28th. "All but one fell within the enemy lines. The offensive spirit of our airmen is well exemplified by a morning's work of two Australian pilots on August 24th. The two machines in company flew over enemy country. When deep into the plain of Sharon they espied an enemy two-seater, whom they rapidly overtook. Instead of the latter diving he kept level and fired many signals. As the enemy machine was obviously a decoy, one pilot swung round and found six German fighting machines swooping down from 1,000 ft. higher. As the leader approached the Australian side-slipped. The German passed over, and was seen no more."

"The Australian pilot then attacked one of the next two aeroplanes and sent the machine crashing to the ground between Burin and Tul Keram. The other Australian, having shot down the two-seater in the Hanutah area, joined his comrade in a "dogfight," and brought down another German in flames close to Tul Keram. It now became a chase; an enemy scout, finding himself being overtaken, was forced to land near Messidieh, and coming into collision with a lorry on the main road was completely wrecked. Four machines were accounted for in a few minutes, and the 'bag' almost certainly amounted to five, for during the fighting over Tul Keram another single seater was driven down out of control, but our airmen were too busy to watch for the crash."

"Twelve Distinguished Flying Crosses have been awarded to the Australian squadron in the month."

THE ROLL OF HONOUR

(When an Officer is seconded from the Army, his unit is shown in brackets.)

Published September 11th.

Killed.
 Hewat, Lieut. R. A.
 Manzetti, Sec. Lieut. C. A.
Previously Missing, now reported Killed.
 Knowles, Sec. Lieut. W.
 McGee, Sec. Lieut. W. R.
Died of Wounds.
 Booker, Maj. C. D.
Accidentally Killed.
 Le Lievre, Lieut. R. H. (Que.).
Cadets Killed.
 Broadhead, F.
 Cunningham, R.
Wounded.
 Gillespie, Sec. Lieut. W. R.
 Imeretinsky, Lieut. C. G.
 Lewis, Sec. Lieut. H. Y.
 Oaks, Capt. H. A.
 Russell, Lieut. G. (R.F.A.).
Missing.
 Belloc, Lieut. L. (R.E.).
 Burton, Lieut. D. F. (Suff.).
 Byrne, Sec. Lieut. C. J.
 Cartwright, Lieut. E.
 Dodson, Lieut. H. L. M. (A.S.C.).
 Henderson, Sec. Lieut. A. B.
 McCleery, Lieut. E. P. E. (Aus. F.C.).

Published September 12th.

Killed.
 Bird, Lieut. F. V.
 Fothergill, Lieut. W. T.
Died of Wounds.
 Bradbury, Sec. Lieut. D.
Cadets Killed.
 Dunn, A.
 Galloway, R. K.
 Hepburn, A. A.
 Scott, S. A.
 Wiltshire, C. E.
Died.
 Beirne, Sec. Lieut. W.
Drowned.
 Brownrigg, Lieut. T.
Wounded.
 Bateman, Lieut. C. B.
 Beck, Lieut. T. M.C. (High. L.I.).
 Blake, Sec. Lieut. W. T. C. (Glouc.).
 Chadwick, Lieut. A. W.
 Chapman, Sec. Lieut. P. K. (Suff.).
 Emden, Capt. C. S.
Previously Missing, now reported Prisoners.
 Arnold, Sec. Lieut. J. (King's L'pool.).
 Ballance, Sec. Lieut. G.
 Brown, Sec. Lieut. J. L.
 Carr, Lieut. R. G.
 Castle, Lieut. G. L.
 Cocking, Sec. Lieut. L. G.
 Doe, Lieut. J. E.
 Eaton, Lieut. C.
 Elvin, Sec. Lieut. A. J.
 Garrett, Lieut. A. L.
 Hall, Lieut. K. W. J.
 Jenyns, Sec. Lieut. C. G.
 Jones-Lloyd, Lieut. O. J. F.
 Nicholas, Sec. Lieut. E. M.
 Pontin, Lieut. S. C. M.
 Purry, Capt. R. O.
 Rickett, Sec. Lieut. W. H. A.
 Smith, Lieut. J. L.
 Sydie, Lieut. J. E.
 Tatnall, Sec. Lieut. E. W.
 Turner, Sec. Lieut. E. G.
 Webster, Lieut. J.
 Wilson, Lieut. W. K.
 Woodman, Sec. Lieut. K. C. B.
 Whyte, Sec. Lieut. R. P.
Previously Missing, now reported Wounded and Prisoners.
 Cobbin, Sec. Lieut. A. J.
 Jones, Lieut. A. D. R.

Published September 13th.

Killed.
 Cunningham, Sec. Lieut. J. B.
 Hojel, Sec. Lieut. J. G.
 Lavington, Sec. Lieut. L. J.
Previously Missing, now presumed Killed.
 Blyth, Flt. Sub-Lieut. R. A., R.N.
 Budd, Flt. Sub-Lieut. V. J., R.N.
 Morris, Flt. Sub-Lieut. E., R.N.
Died of Wounds.
 Hobbs, Sec. Lieut. T. G.
Cadets Killed.
 Hewson, A. D.
 Jennings, C. J.
 Johnston, M. J.
 Kirwan, M. W.
Wounded.
 Appleby, Sec. Lieut. J.
 Gosling, Sec. Lieut. R. N.
 Goudie, Lieut. M. H.
 Holling, Sec. Lieut. J. M.
 Horton, Sec. Lieut. C. R. R.
 Johnson, Sec. Lieut. J. W.
 Legg, Lieut. V. C.
 Manby, Lieut. A. W.
 Powell, Sec. Lieut. F.
Missing.
 Amos, Sec. Lieut. J.
 Borrowman, Sec. Lieut. J. J.
 Caldwell, Sec. Lieut. J.
 Collis, Sec. Lieut. T. B.
 Cuthbert, Lieut. J. B.
 Edwards, Lieut. C. G.
 Gill, Lieut. C. E. G.
 Heaver, Sec. Lieut. A. R.
 Johnston, Lieut. T. A.
 Lewis, Lieut. W. T. S.
 Mollison, Lieut. J.
 Newey, Sec. Lieut. T. (Leic.).
 Parnell, Sec. Lieut. E. A.
 Pim, Lieut. T. (R.F.A.).
 Viveash, Sec. Lieut. A. J.
 Melvin, Sec. Lieut. W. S. (Rif. Brig.).
 Moorhouse, Sec. Lieut. W. (R.W. Kent).
 Shirlock, Sec. Lieut. C. E.
 Williams, Flt. Sub-Lieut. F. T. P., R.N.
 Wilmot, Flt. Sub-Lieut. W. H., R.N.

Published September 14th.

Killed.
 Blundell, Lieut. A. C.
 Dillon, Sec. Lieut. W. R.
 Pepper, Sec. Lieut. E. H.
 Pither, Capt. C. E.

Accidentally Killed.

Fry, Sec. Lieut. S. C. (Aus. F.C.).
 Eveling, Lieut. E. R. (Aus. F.C.).
Died.
 Fox, Sec. Lieut. W. R. S.
 Keen, Lieut. S. W., M.C. (Lond.).
Died of Wounds.
 Kirwan, Lieut. L. (S. Lanrs.).

Cadets Killed.

Duval, J. T.
 Eunsom, J. T.
 Litchfield, R. W. R.
 O'Leary, H. B.
 Paul, H. F.
 Winnet, W. H.

Wounded.

Bentley, Lieut. A. O.
 Devitt, Sec. Lieut. L. K.
 Evans, Lieut. R. J.
 Fox, Sec. Lieut. H. J.
 Kier, Sec. Lieut. J. N.
 Knee, Sec. Lieut. B.
 Lawrence, Sec. Lieut. H.
 Mahony, Lieut. M. F. J. R. (R. Innis. Fus.).
 Onions, Sec. Lieut. A.
 Puckle, Capt. H. (Leic.).
 Watterson, Lieut. H. R. (R.G.A. (S.R)).

Missing.

Bennett, Lieut. L.
 Bridge, Sec. Lieut. C. H. A.
 Bunbury, Capt. T. St. P. (R.F.A.).
 Crookell, Sec. Lieut. S. E.
 Goodhugh, Sec. Lieut. P. H.
 Jackson, Sec. Lieut. W. R.
 Leighton, Lieut. K. A. W.
 Loudon, Capt. L. G.
 Luard, Sec. Lieut. R. B. (R.A.).
 MacFarlane, Lieut. W. K.
 Ormerod, Sec. Lieut. W.
 Pike, Sec. Lieut. H. G.

Published September 16th.

Killed.

Booth, Sec. Lieut. S. C.
 Carpenter, Sec. Lieut. E. E.
 Case, Sec. Lieut. S. F.
 Child, Capt. J. M. (Manch.).
 Clark, Sec. Lieut. G. W. F.
 Hampton, Lieut. F. A. F.
 Hayward, Sec. Lieut. F. R.

Accidentally Killed.

Cummings, Sec. Lieut. R. L. (Aus. F.C.).
 Parkes, Sec. Lieut. W. (Aus. F.C.).
 Scott, Lieut. C. W. (Aus. F.C.).

Cadets Killed.

Bender, C. A.
 Hamar, R. G.
 Leblanc, E. P.
 Miller, H. S.
 Rosenthal, S.
 Saunders, J. F.

Cadets Accidentally Killed.

Jefferys, E. H. (Aus. F.C.).
 Pillow, R. N. (Aus. F.C.).

Wounded.

Adamson, Lieut. J.
 Aldridge, Lieut. A. L.
 Aslin, Lieut. R. L. (Lond.).
 Bishop, Sec. Lieut. A. J.
 Bradbury, Lieut. G.
 Brandon, Sec. Lieut. T. (Durh. L.I.).
 Burke, Sec. Lieut. D. C.
 Cogan, Sec. Lieut. J. A.
 Cook, Sec. Lieut. F. C. (Bed.).
 Cowie, Sec. Lieut. W. A.
 Cowper-Coles, Lieut. S. W. (A.S.C.).
 Edoes, Sec. Lieut. R. T. (Aus. F.C.).
 Frederickson, Lieut. F.
 Garside, Sec. Lieut. A. J.
 Hall, Sec. Lieut. J.
 Howard-Brown, Lieut. J. (N. Staffs).
 Locke-Waters, Lieut. E. A.
 Pentland, Capt. A. A. N., M.C., D.F.C.
 Sandys-Winsch, Lieut. A. E. (R.F.A.).
 Wallace, Sec. Lieut. M.
 Walton, Sec. Lieut. R. G.

Previously reported Wounded, now reported Not Wounded.

Howard, Sec. Lieut. F. (Aus. F.C.).

Missing.

Barritt, Lieut. G. L. (Lincs).
 Boys, Sec. Lieut. R. H. G.
 Challis, Sec. Lieut. M. E. (R.W. Kent).
 Clarke, Sec. Lieut. H. W.
 Cockin, Sec. Lieut. J. B.
 Coles, Sec. Lieut. G. T.
 Cowgill, Sec. Lieut. W. A. F.
 Dugdale, Sec. Lieut. J. G.
 Gardener, Sec. Lieut. C. E.
 Grant, Capt. R. C. (Soo. Rif.).
 Hall, Sec. Lieut. W. A.
 Hamilton, Sec. Lieut. D. S.
 Martin, Sec. Lieut. D. A.
 Peeling, Sec. Lieut. H. V.
 Pope, Lieut. R. A. B., M.C. (M.G.C.).
 Rose, Sec. Lieut. D.
 Scharff, Sec. Lieut. R. L.
 Scrivener, Sec. Lieut. H. A.
 Sinclair, Sec. Lieut. D. B.
 Strathearn, Lieut. W. M.
 Stringer, Sec. Lieut. J. S.
 Wormald, Sec. Lieut. W. M.
 Young, Lieut. G. F.

Published September 17th.

Killed.

Hall, Sec. Lieut. J. H. (Lancs. F.).
 Jameson, Lieut. J. B.
 McFarlane, Sec. Lieut. A.
 Morris, Capt. J. F., M.C.
 Palmer, Lieut. A. B.
 Scrase, Lieut. J. (Buffs).

Died of Wounds.

Urinowski, Sec. Lieut. A.

Died.

Spencer, Sec. Lieut. T. K.

Cadets Killed.

Byrnes, J. A.
 Crozier, G. C.
 Harvey, A. E.
 Laird, A. B.
 Robson, J.
 Weir, H. R.

Wounded.

Arnott, Sec. Lieut. A. D. M.
 Bolitho, Lieut. S. J.
 Clemshaw, Sec. Lieut. C. W. (Essex).
 Davidson, Sec. Lieut. F.
 Forbes, Sec. Lieut. A. J.
 Gibbs, Lieut. S.
 Goring, Sec. Lieut. A. J.
 Greasley, Sec. Lieut. W. S.
 Hodgson, Lieut. G.
 Marsh, Sec. Lieut. L. R.
 McAslam, Sec. Lieut. J. (High. L.I.).
 McFadden, Sec. Lieut. H. S.
 Metcalf, Sec. Lieut. A. (Glouc. R.).
 Mitchell, Lieut. J. A.
 Morrison, Sec. Lieut. R.
 Mould, Lieut. H. A. H. (North'd. I.).
 Nolan, Sec. Lieut. T.
 Phillips, Lieut. L. H.
 Potts, Sec. Lieut. J. T.
 Salter, Capt. E. J.
 Sharp, Sec. Lieut. L.
 Stewart, Sec. Lieut. J. K.
 Waine, Sec. Lieut. C.
 Wilson, Sec. Lieut. H. H.
 Lindsay-Young, Capt. L. H. L.

Missing.

Herriot, Sec. Lieut. W. M. (K.L.R.).
 Raymond, Sec. Lieut. L. B. (A.S.D.).
 Robinson, Sec. Lieut. F. E.
 Rochford, Sec. Lieut. S. W.
 Wallace, Sec. Lieut. K. H.

Previously reported Prisoner, now reported Wounded and Prisoner in German hands.

Edmond, Sec. Lieut. E. P. P. (R.F.C.).

THE 300 H.P. MAYBACH ENGINE.

Issued by the Technical Department (Aircraft Production), Ministry of Munitions.

(Continued from page 1035.)

Carburettors.—The two carburettors are attached to the heads of the front and rear cylinders, as already described, and their general construction is shown in the cross-sectional drawing Fig. 40. The carburettors follow the distinctive principles of the well-known Maybach design, but are slightly modified in many of their details as compared with the earlier engines.

These carburettors are designed to be used in conjunction with a petrol pump system, and in place of a float chamber

throttle, and the extra air supply is automatically controlled by a guillotine-type shutter, which works vertically just in front of the jet control lever. The throttles of both carburettors, together with the mechanically controlled jets and the extra air shutters, are all inter-connected. The arrangement of these cranks and inter-connecting levers is shown in the photograph of the specially sectioned carburettor (Fig. 34).

The working principle of the carburettors and the functions

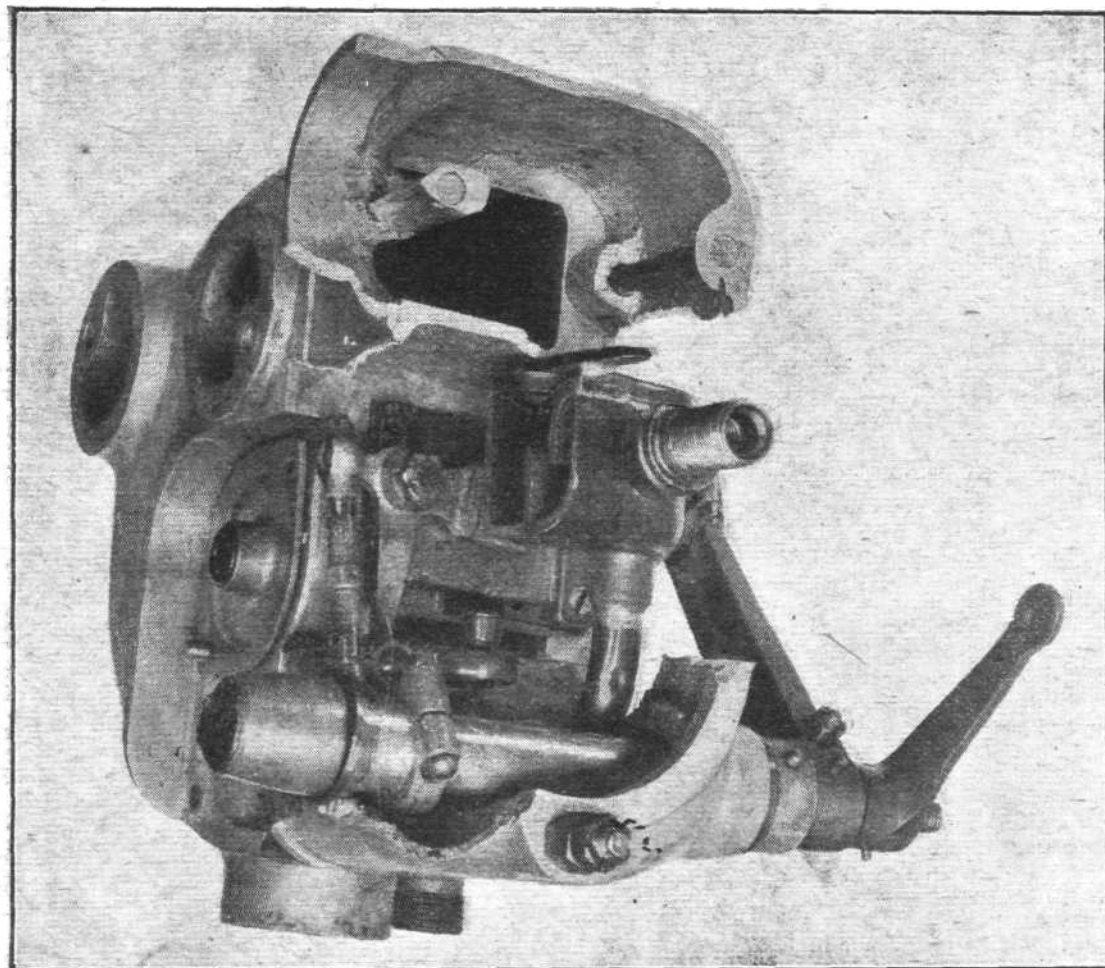


Fig. 34.—One of the carburettors broken to show gravity petrol reservoir, and inter-connected throttle, jet control and main air guillotine shutter, also induction and water passages to cylinders.

employ two small constant-level overflow tanks inside each carburettor. This method obviates the necessity for using pressure release valves in the petrol system. Referring to the sectional drawing of the carburettor (Fig. 40), they are constructed of a cast aluminium water-jacketed body, in the centre of which is mounted the rotary barrel-type

of the various parts is more clearly demonstrated in the purely diagrammatic sectional drawing, Fig. 35, which is, to a great extent, self-explanatory. Petrol is delivered by the petrol pump into the small tank A of each carburettor through a restricting jet, B, shown in the diagram. The petrol in these small tanks or reservoirs is kept at a constant level by means

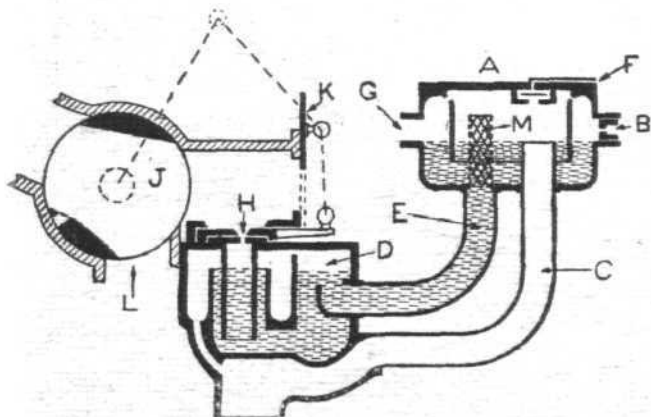


Fig. 35.—Diagrammatic section of carburettor.

throttle, open on one side to the curved passage to the induction pipe, and on the other to the mixing chamber above the jets. The main air supply is taken through a passage cast in the aluminium carburettor body directly below the

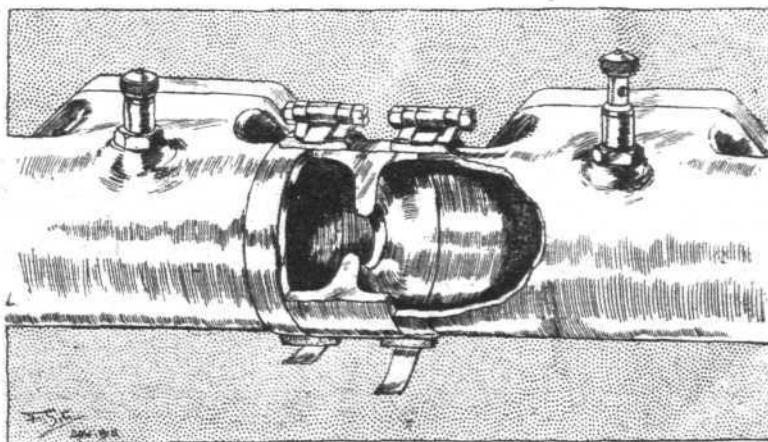


Fig. 36.—Induction pipe baffle and priming caps.

of the overflow pipe C, which leads back to the main petrol tank via the small lower tanks D below the jets which are supplied through the pipe E. An air vent, F, fitted with a baffle plate, is provided in the top of the constant level tank

A, which is also connected to the main petrol tank by a pipe, G, leading to a hand petrol pump, or may be plugged and not used, as was the case in the Rumpler biplane. The main and pilot jets consist of two holes drilled in the top cover of the lower reservoir D, and are similar in principle to the White and Poppe jets. The area of the jet openings is mechanically controlled by means of a small hole drilled eccentrically in the jet cap H, which, as previously described, is connected by levers to the throttle and air control levers. The function of the top tank A is apparently to deal with the large excess of petrol delivered by the petrol pump at

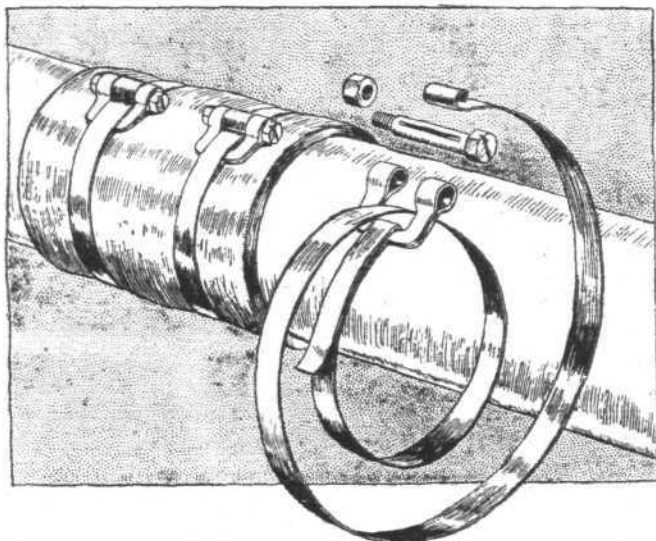


Fig. 37.—An ingenious steel band joint clip, used on the rubber connections of induction pipes and water joints.

high speeds, whilst the lower tank, which is gravity fed, provides a constant petrol level for the jets.

The mixture strength at any point on the throttle curve is governed by purely mechanical means, there being no venturi or special jet arrangement. The jet depression is obtained by restricting the air flow at what approximates to a sharp-edged orifice, consequently the loss through the carburettor is very high compared with a carburettor using a venturi tube to get the jet depression.

Contrary to usual practice, the jet depression actually increases on throttling down, the depression being about four times as great at half-throttle as at full throttle.

Control adjustment.—When running slowly, the throttle is slightly open, the supplementary air port closed, and the air shutter practically closed. In this position the small or pilot jet only is open. On opening the throttle the supplementary air port commences to open in conjunction with the throttle opening. The main air shutter automatically opens in proportion, admitting more air, which passes directly across the top of the jets, and the jet area increases until the main jet orifice is fully open.

Owing to the inter-connection of the control levers there comes a point when the supplementary air port area increases out of all proportion to the increase in the jet area, the latter reaching a limit with no further increase by reason of the arrangement of the levers. This point represents the opening for maximum power at ground level. If the throttle is opened beyond this point, the air supply rapidly becomes out of proportion to the jet opening and petrol supply. By this arrangement a simple form of altitude control is provided.

The various positions for "slow running," "slow speed," "full speed" and "altitude," are marked on the body of the carburettor, and are indicated by a pointer attached to the throttle lever of the rear end carburettor. By means of these markings on the carburettor the correct settings of the throttle lever can be checked when the engine is installed in the machine.

The translation of these markings on the carburettor is as follows:—

LE = Leer = running light. V = Voll = full speed.
LA = Langsam = slow speed. H = Hohe = Altitude.

The induction pipes are aluminium castings, and are of exceptionally neat design, being, as shown in Fig. 36, joined together in one straight pipe. A cast aluminium baffle plate drilled in the centre with a 20-mm. hole is provided in the centre of the two induction pipes between the front and rear three cylinders. This baffle is evidently fitted to equalise the gas supply to all cylinders.

The design of this equalising baffle is shown in the perspective sketch Fig. 36, which also shows the method of joining the ends of the induction pipes by rubber connections and band clips.

Details of the six small primer valves fitted into the top of the induction pipe are shown in the sketch. Fig. 37 clearly shows the construction of the interesting type of band clip which is used for making the connections in the induction pipes, and also for most of the water joints on these engines. These clips are now extensively used on all enemy engines. The method of using these clips is herewith reprinted from the previous report on the 230 h.p. Benz engine.

The clips are made of thin strips of annealed spring steel; these are wound twice round the rubber rings and fastened by small steel links and bolts. In starting to make this joint, the end of the steel band is first bent over the bottom bar of the connecting link, and then wound twice round the rubber ring, the free end of the steel band passing through the centre portion of the connecting link on the second winding. The end of the steel band is then fastened to the top end of the link by coiling the end several times round the small bolt in the head of the link, the end of the steel band being bent over for about 2 mm., and inserted into a slot cut in the bolt, so that by turning the bolt in the link the steel band is wound tightly round the ring joints, and, owing to the position and shape of the link, remains fixed.

Carburettor tests.—The Maybach carburettor has been tested separately at R.A.E. The result of these tests is shown graphically in the power and throttle curves (Fig. 41), together with a throttle curve diagram in comparison with the H.C.8 Claudel-Hobson carburettor (Fig. 39).

Characteristic curves.—(a) Throttle curve.—The throttle

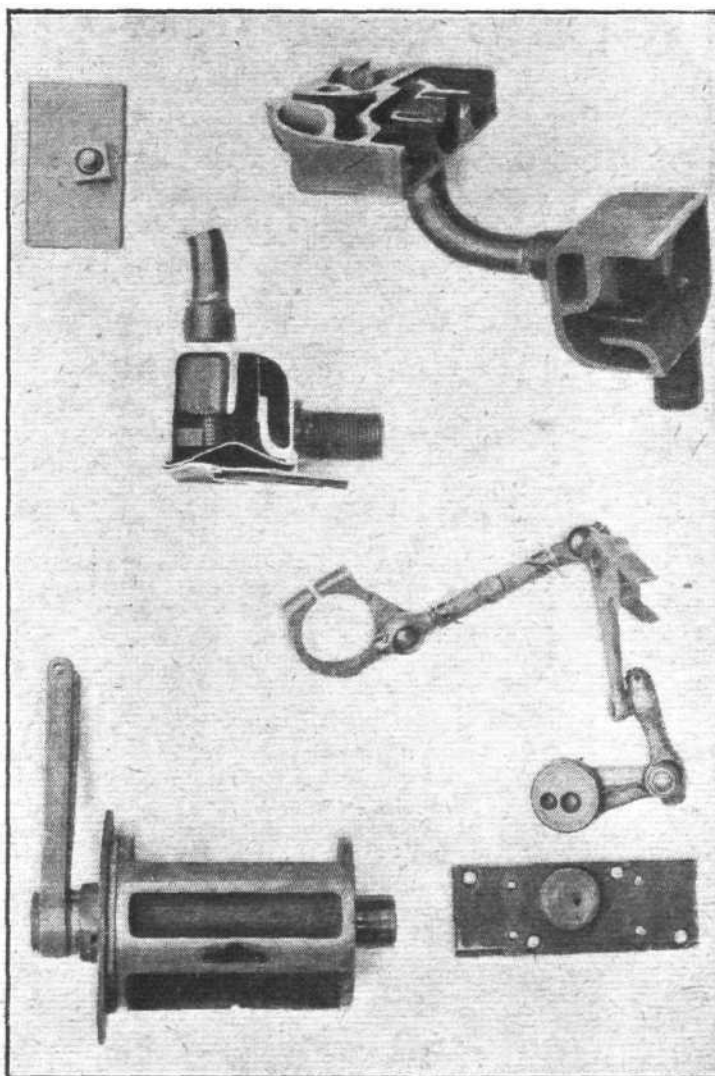


Fig. 38.—The throttle and jets dismantled; air-shutter, and sectional views of petrol reservoirs in carburettors.

curve appears good. There is an excess of petrol at first which should give good acceleration, and there is a fair range, down from full throttle, of weak mixture suitable for cruising. Obviously, if it is considered desirable to have petrol and air

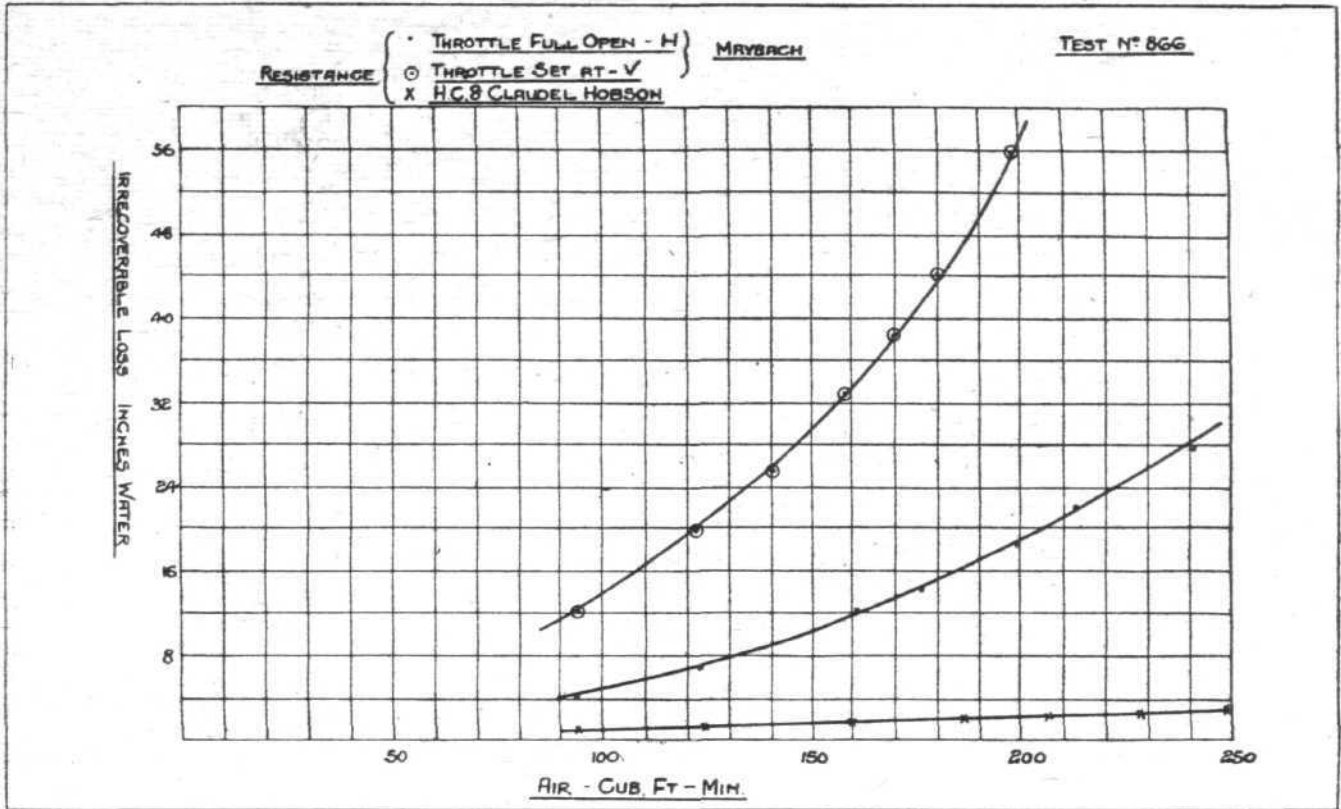


Fig. 39.—Diagram of comparative tests of carburettor.

control interconnected, any required throttle curve could be obtained, but it makes an unnecessarily complicated instrument. In this particular carburettor there are four ball universal joints and two sliding blocks.

(b) Power curves.—The power curves are satisfactory, the mixture being practically constant over a large air speed range.

Resistance Test.—The resistance is very high compared with carburettors of ordinary design. For purposes of comparison, the resistance of the H.C.8 Claudel - Hobson carburettor is plotted on the same curve. The two carburettors are for engines of about the same horse-power, and it will be seen that the resistance of the Maybach is about nine times that of the Claudel-Hobson.

Atomisation Test.—

	Air, temperature.	Air, cub. ft. min.	Petrol, pts./hr.	Deposit, cc./min.	Deposit, % of petrol flow.
Maybach ..	58°F	192	50	23	4.85
H.C.8 Claudel-Hobson	58°F	195	51	32	6.62

The atomisation of the Maybach is rather better than the Claudel-Hobson, but this is obtained by a high depression and high loss through the carburettor.

Conclusion.—The carburettor seems satisfactory on throttle and power curves and atomisation, but the resistance is very high and the weight excessive. The throttle curve is obtained by a complicated mechanical system which would need careful first adjustment and constant adjustment for wear. The air is taken in through the moving parts, and if any dust is present the mechanism is very liable to stick or to render the control very hard to operate.

Petrol Supply System.—Petrol is supplied to the two carburettors by a small double-acting duplex petrol pump, which is attached to the rear end of the bottom half of the oil base, and is driven at half engine speed directly off the rear end of the main oil pump spindle, the petrol pump driving shaft being coupled to the oil pump spindle by a dog clutch. The installation of the petrol pump is clearly shown in the general arrangement drawing of the engine, and the details of the petrol supply system are shown in the diagrammatic drawing (Fig. 27).

Regarding the installation of the petrol supply system to the petrol pump in the machine, it is assumed that the main petrol tank is provided with the ordinary float regulator, which has always been fitted inside the petrol tanks for regulating the supply through the petrol pumps; but owing to the fact that the machines from which these new Maybach engines were taken are completely destroyed no information regarding the construction and installation of the petrol tanks is available.

In the Rumpler machines fitted with the 260 h.p. Mercedes engines two petrol tanks are fitted. The main tank is in the centre of the fuselage behind the pilot's seat, and the auxiliary tank is situated under the pilot's seat.

Petrol Pump.—The design of the compound petrol pump is shown in the sectional drawing (Fig. 43) and also in the sectional perspective sketch (Fig. 42).

The petrol pump consists of two opposed cylinders, in which a reciprocating plunger works, the ends of which operate as single acting pumps. The pump plunger carries a yoke fitted with a sliding bush, which forms the crank-pin

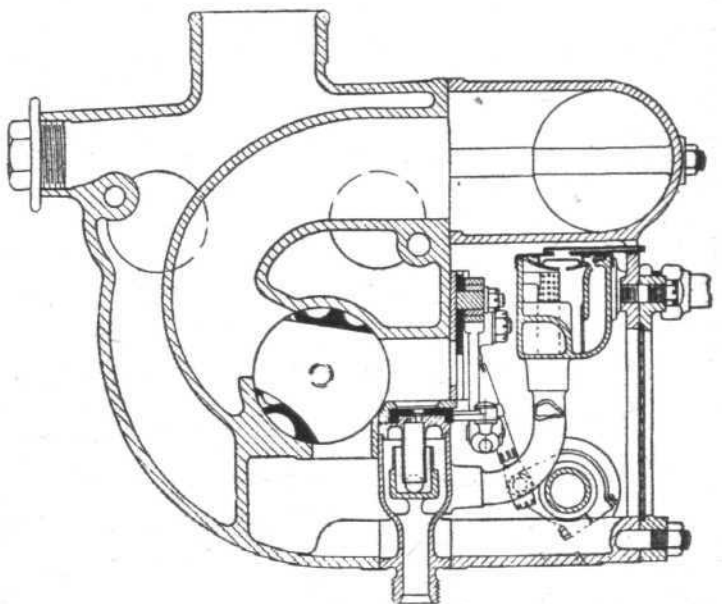


Fig. 40.—Sectional arrangement of carburettor.

bearing of the small pump crankshaft, driven, as already described, off the rear end of the oil pump spindle at half engine speed. The bore of the petrol pump plunger is 15 mm. and the stroke is 17 mm. The outer ends of the pump barrels are as shown, and are fitted with screwed plugs, which form compression chambers.

The small non-return suction valves are situated directly above and below the two compression chambers, and the two petrol delivery valves are fitted above the compression chambers. The valves communicate with the compression chambers through small ports drilled in the pump barrel. Both the suction and delivery valves are of the poppet type,

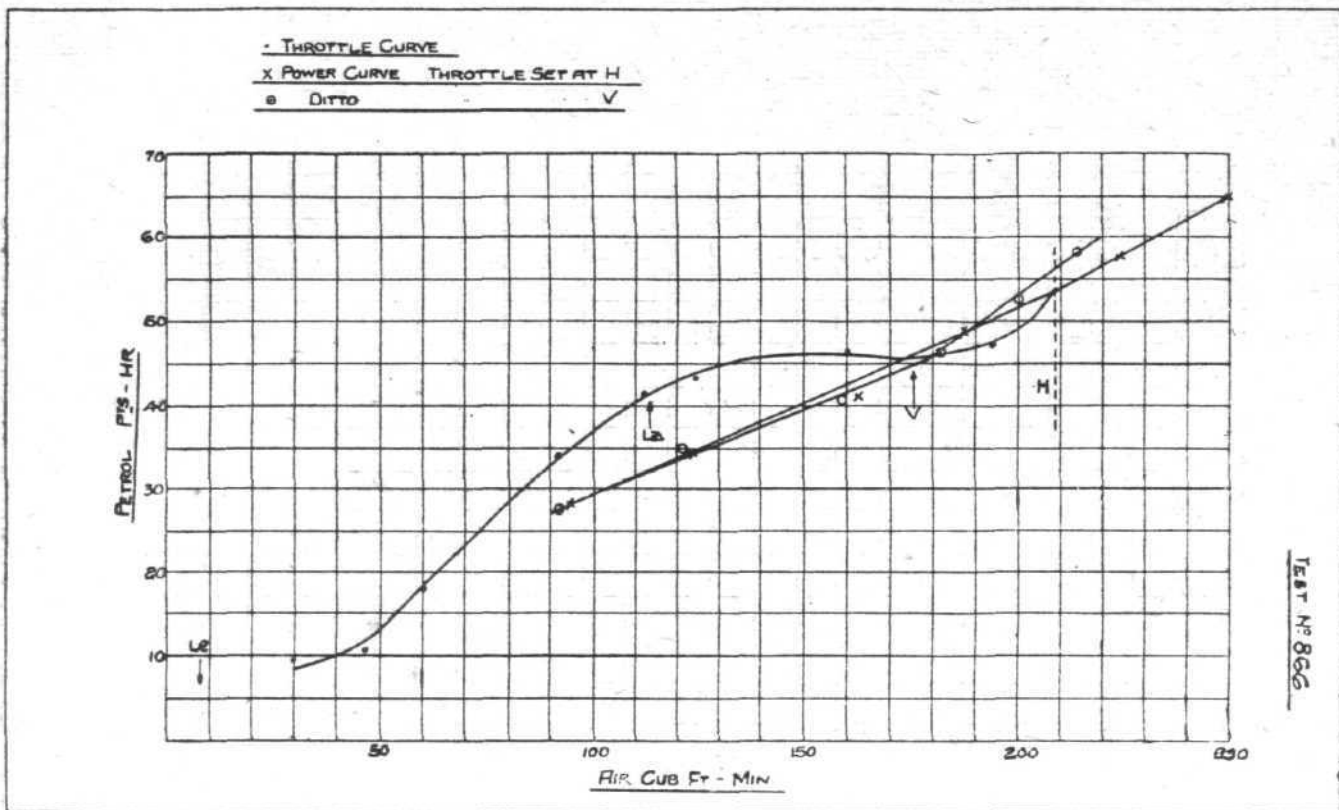


Fig. 41.—Carburettor test—Throttle curve diagram.

and each delivery valve is spring loaded by means of a small brass wire coil spring.

The valves are supported in guides drilled in the unions which form the valve boxes, and to which the petrol delivery pipes from the petrol tanks and to the carburettors are connected. The internal diameter of both these pipes is 10 mm.

It will be noticed that both the suction valves are fed by the same petrol supply pipe as shown in the sketch.

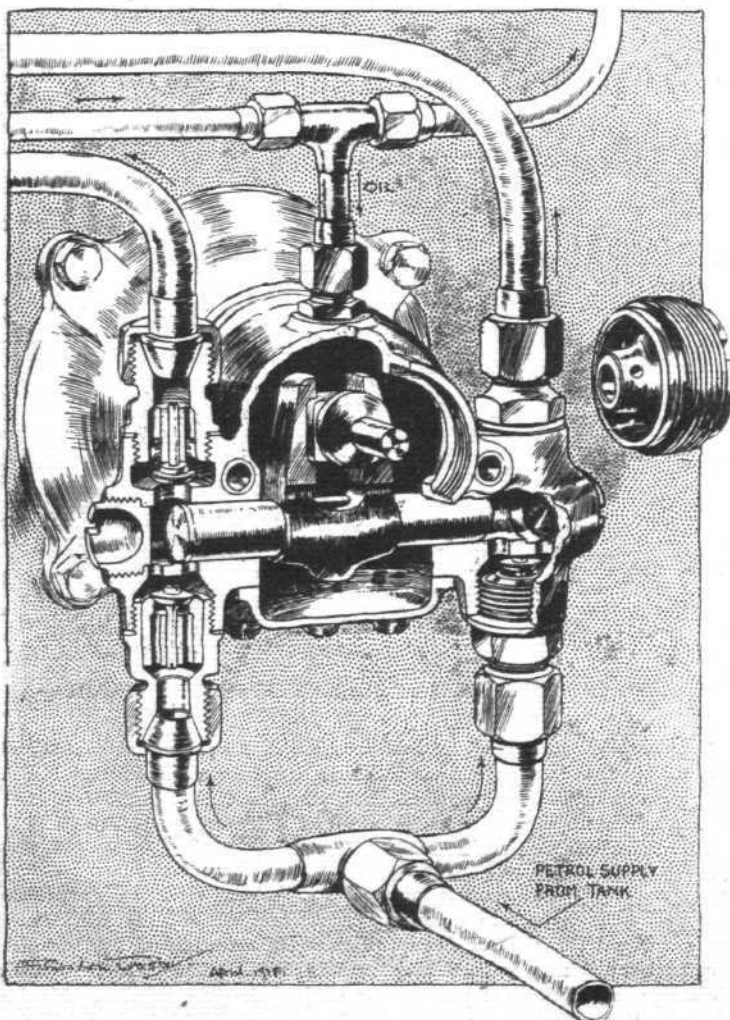


Fig. 42.—Sectional sketch of petrol pump.

The centre portion of the petrol pump body, which is a gun-metal casting, forms a small circular crank chamber for the pump plunger, and is fitted at the bottom with a detachable cover plate, which is secured by six set screws. The whole of the pump crank chamber is filled with oil under pressure from the main lubrication system, through an oil pipe connected to the centre of the pump body casting, and leading from the rear end of the detachable main oil lead pipe on the engine. By this means the efficient lubrication of the yoke and sliding bush and also of the seating of the pump plunger is assured.

R.A.E. Tests of Petrol Pump.—Flow tests at three speeds with varying heads, were taken; in order to represent working conditions in the engine, flow tests were also taken through jets similar to those employed on the engine.

Delivery Tests.—The petrol pump was run at three speeds, viz.: 550, 800, and 1,275 r.p.m., and the outlet pipe was connected to the pump against a variable head from zero to 6 lbs. per square inch.

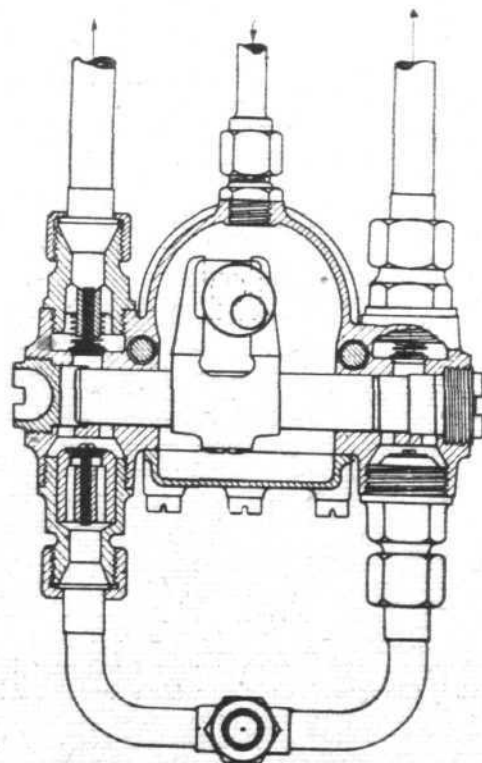


Fig. 43.—Sectional arrangement of petrol pump.

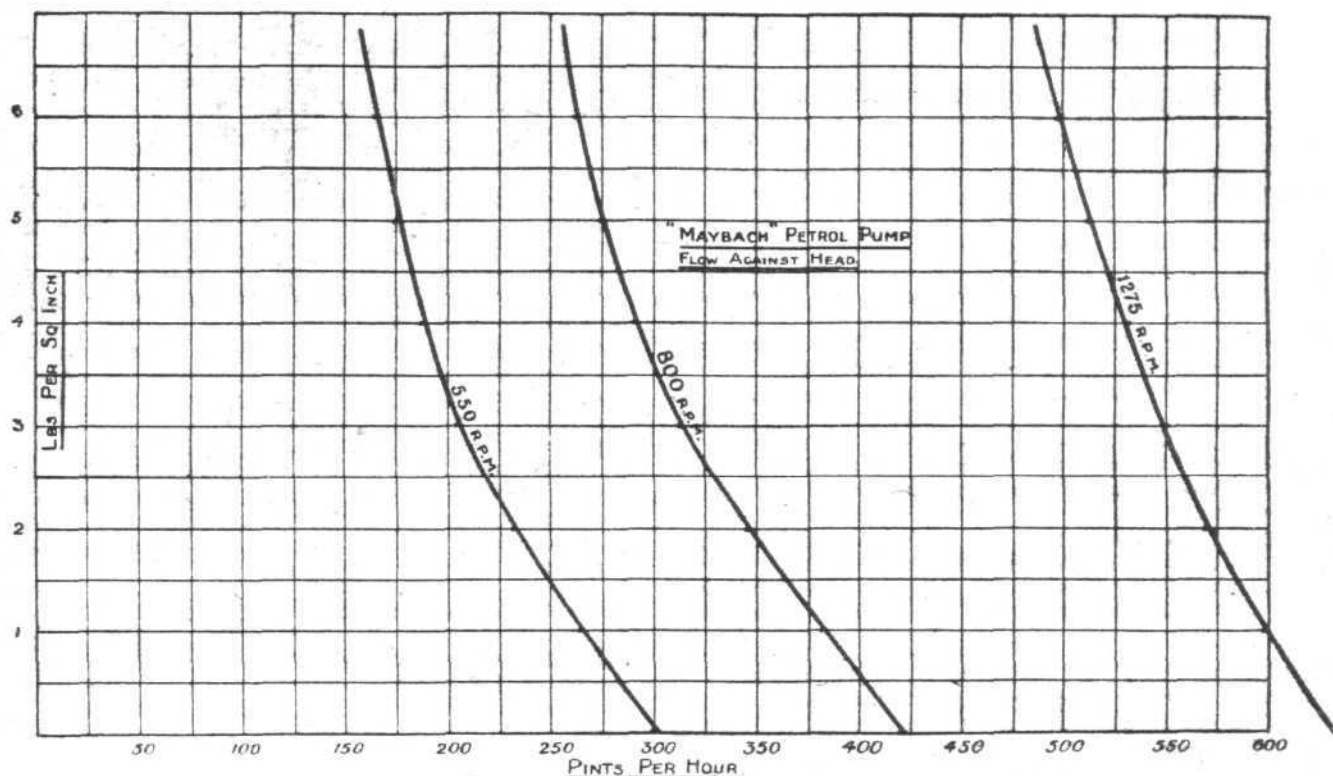


Fig. 44.—Diagram of petrol pump delivery flow against varying heads.

The maximum and minimum petrol delivery at these speeds and heads are given in the following table:—

Revs. per min.	Maximum flow. Zero head.	Minimum flow. 6 lbs. head.
550	300 pints per hour	167 pints per hour
800	422 pints per hour	264 pints per hour
1,275	630 pints per hour	498 pints per hour

Fig. 44 shows the graphs of these tests with varying heads plotted against delivery at constant speeds. These curves are quite normal, and it is evident from them that the valves are acting well, and that the drop in delivery with increasing head resistance is due to cavitation. The pressure of the oil in the pump case during these tests varied between 15 and 20 lbs. per square inch, and the leakage of oil and petrol past the end bearing of the pump spindle during one hour's run was approximately one pint.

Tests Through Engine Delivery Jets.—In the engine the petrol is delivered through restricting jets (shown in Fig. 35) into the constant-level tanks, which feed the jet chambers below, and are provided with over-flows to the main petrol tank.

In the tests both outlets of the pump were connected by a Y piece with one delivery pipe, the end of which was closed by a plate $\frac{1}{8}$ in. in thickness, having two .07 diameter jet holes drilled through.

The petrol pump was run at the three speeds as in the former tests, and the following results recorded of delivery and head resistance:—

r.p.m.	Head resistance.	Pints per hour.
550	4.5 lbs.	160 pints
800	9 lbs.	218 pints
1,275	25 lbs.	360 pints

Starting Gear.—The principle of the Maybach starting gear is now so well known that only a brief description of the mechanism and a few details of the construction will be necessary.

In the semi-diagrammatic cross-sectional drawing of the engine, Fig. 45, the working principles of this simple and distinctive starting mechanism are clearly shown. By the depression of the hand lever A on the induction side of the engine, all the tappets are lifted off their cams through the action of small lugs formed on the top of the tappets, which fit into slots cut in the tubular lay shafts BB. All the valves, both inlet and exhaust, are thus opened in the cylinder heads; and at the same time the hand lever A closes the shutter C in the exhaust manifold by the connection of levers shown in the drawing. The valves and exhaust shutter are then locked in this position by a peg, which is inserted in two holes, D, which now coincide in the hand lever A. By the action of a large hand suction pump, E, in the pilot's seat, gas is then drawn into the combustion chambers through the inlet valves and induction pipe from the carburettors as indicated in the diagram. When the cylinders are charged the valves are returned to their normal positions by the withdrawal of the locking pin in the hand lever A, and simultaneously the

free passage in the exhaust manifold is again opened by the shutter C. Ignition is then effected by means of a Bosch hand-starter magneto in the pilot's seat. It will be noticed that the exhaust shutter lever is provided with a spring-loaded tie rod to ensure a true seating for the shutter. In order to prevent the engine from being started until the hand lever has been released to its off position, the locking hole in the lever which takes the pin is made in such a way that only a special form of locking pin can be used. For this purpose the handle of the starting magneto is made

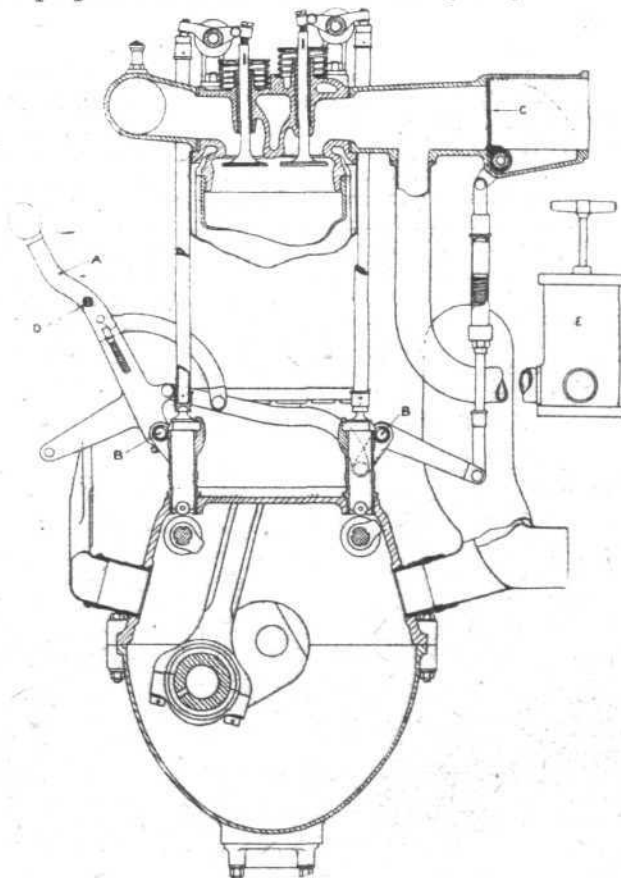


Fig. 45.—Diagrammatic section of engine, showing functions of starting mechanism.

easily detachable, and is used for the purpose of locking the hand lever A. It is thus practically impossible to cause ignition with the valves open and the exhaust passage closed, which, of course, would cause firing back into the carburettors, and probably also result in destroying the hand pump.

(To be concluded.)

AIRISMS

FROM THE FOUR WINDS

Looks like somebody having unearthed a mare's-nest in the to-do about the Air Ministry turning the whole of the Adelphi Terrace into an Annexe to the Hotel Cecil. The facts from which the persistent rumours arose are, so the explanation runs, that the Adelphi Hotel was taken over some time ago as quarters for the men of the Air Ministry, and that owing to the urgent need for additional office accommodation for the Air Ministry it has been found necessary to divert the Adelphi Hotel to that use, and the men must be billeted elsewhere. The present intention, so the authorities claim, is certainly not to take any of the premises in Adelphi Terrace, as additional billet accommodation to meet the immediate and urgent requirements will be obtained by taking over certain premises in Adam Street.

All the same, the last sentence covers a whole heap of future possibilities, and after all, if it *really* be necessary, why not Adelphi Terrace? If even a club or two should be inconvenienced, they won't be the first. They can hardly get it in the neck worse than the Constitutional experiences!

STRIKES just now are anathema to most people, and it wants a lot of convincing to obtain the support of public opinion. But if a strike can claim sympathy—genuine and emphatic—and get it, we think it is the case of the party of Germans who went on strike on ascertaining that a number of conscientious objectors were to be employed on the same job. They gave as their reason for refusing to work, a "conscientious objection" to associating with men who were too cowardly to fight for their country. They persisted in their refusal to work in such company, and the matter was at once reported to the military authorities at headquarters.

After all, the Hun is no saint, we know, but at least he has been fighting as a patriot and to order, however wrong his views may be from our point of vision. Punish the war prisoner for misbehaviour as a prisoner each and every time, but it surpasses the limit in putting him on a par with the 1914-1918 Conchie. That is a special cuvee all to itself and should remain so for at least the present generation of Britons.

"DESTRUCTION for destruction's sake seems to have been their (the Huns') motto." Thus Sir Martin Conway, Director of the Imperial War Museum, in concluding a statement after a recent visit to the front. "I came back," says Sir Martin, "wanting vengeance on the Germans. I do not think England at all appreciates the enormous damage the Germans have done. In town after town and in hundreds of villages there is absolute red ruin." But we hardly agree with Sir Martin's conclusion as to the destruction being just for the sake of it. Rather in our opinion are the barbaric and systematic actions of the Hun carried through after most deliberate cold-blooded premeditation, and retribution should await their country at the peace table in the form of an eye for an eye, applied to their amazing non-military orgy of destruction. It is the only way to be even with them. Their deliberate

work is for the purpose of leaving such complete devastation throughout Belgium and the Eastern borders of France and any other country which their presence has been able to defile, that for at least the next generation these blackened countries shall be under the necessity of giving their work out to Germany to re-construct what the enemy has himself destroyed. And, moreover, supply the inhabitants with German goods the meantime, until such time as the industrial sides of the devastated nations are built up again. This is the Hun's scheme for overcoming the world's ostracism which inevitably awaits his industries after the war. But if the representatives of the Allies do their duty to their respective peoples when the terms of peace are dictated at Berlin presently, the Hun will again find he has reckoned without his host and be ever and ever more sorry for himself. No, the destruction is about as premeditated a barbarity as ever disgraced this sphere of ours.

At the recent gathering of the R.A.F. cadets, in addition to the living flag depicted by the cadets against the side of the hill beyond the review ground, the cadet members also in graphic and like manner, depicted "R.A.F. Honours."

V.C.	D.S.O.	M.C.	D.S.C.
15	235	905	287

The effect was extraordinarily striking.

THE HOT AIR SHOPS. By F. A. de V. R.

At the aerodromes, the officers believe that Wing H.Q. is an abode of idle luxury. The Wing Commander and his staff do not trouble to undeceive them, but they have some varied work to do all the same. Half an hour in the office of the Wing Equipment Officer would give some idea of what that work is like.

The telephone rings. The E.O. takes the receiver. "Hullo! Who is that? Transport Officer at Z—, Capt. Smith has had a forced landing 20 miles away, eh? No one hurt? Good. Yes, you may send out a Ford with mechanics. Confirm your request in writing as usual. Good morning."

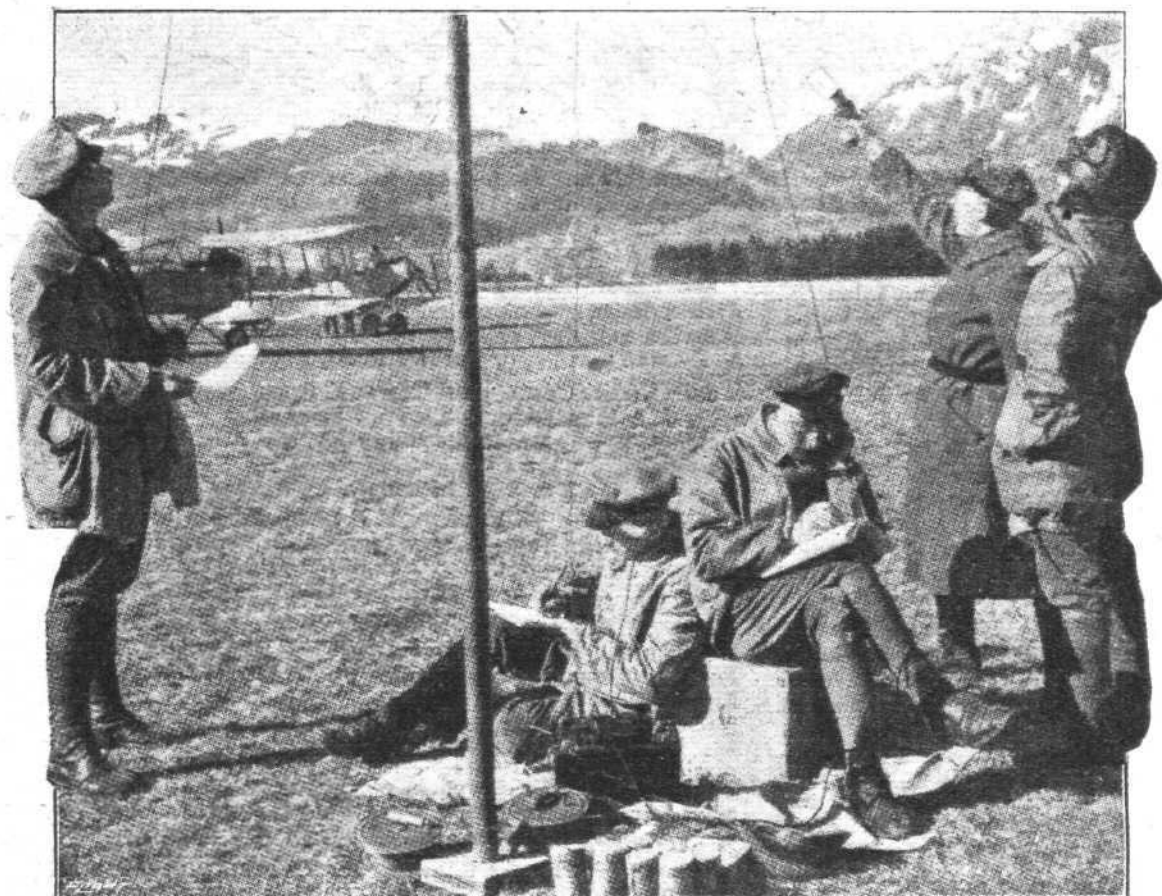
The E.O. rings up Y—. "Quartermaster please. Oh, morning Brown. Have you found out if you can save any petrol by hiring farm carts to fetch goods from the station? Oh! you *can* hire carts! And it will be some saving? Good. Carry on, please."

The E.O. turns to his Sergeant. "What's this file? A claim for damages to a hay crop when an aeroplane was forced to land in it from engine trouble on the 15th. Very moderate claim. A patriotic fellow that farmer. Pass the claim on to the Brigade."

He turns to the telephone. "Give me Aeroplane Repair Section at R—. Hullo, Robinson. That machine C.231 has been in your shed a long time. When will it be ready? Got no under-carriage lugs, haven't you? Switch me on to Technical Stores please. Is that you, Jones? Have you indented for those under-carriage lugs for Robinson? A week ago, did you? Have you asked Y— if they have



AT WHITEHEAD'S SPORTS.—Silver Badge men, all employed at the works, who formed a guard of honour for Lady Haig.



"Wireless."— Operators at a German station receiving messages from a machine in the air. The man on the right indicates to the aviator that the message is understood, by firing a signal pistol.

any? They have none, eh? Right, I'll ring up the Stores Park and try to get a move on."

"Sergeant, have the proceedings of that Court of Enquiry come in? You know, when the lorry ran into a lamp-post outside the railway station. What, they didn't make the driver give evidence? Duffers! They can't make deductions from his pay if he didn't give evidence. We must send that back. Just draft out a stiff letter."

The telephone rings. "Who's that? Oh, Brigade. Good morning, Sir. You are going to take three machines from us for the North Wing! Oh, but you know, Sir, we are short of machines already. How can we keep up our record if you take our machines away like that Sir? I see, Sir. Well, of course, if it's an order the North Wing will send pilots to fly the machines over? Thank you very much, Sir. Good morning."

"Give me engine shop at Y—. That you, King? You know you've got far too many machines unserviceable in your shop. Five should have been finished yesterday, and your report shows that none were actually finished. Why? What! Ten fitters went to hospital? What's the matter? Flu, did you say? Spanish influenza? Oh, hang! But, mind you, flu or no flu, the work of the Air Force can't stop. The Boche won't wait our convenience. So get a move on, King."

A moment later he turns to the Sergeant.

"You might see if you can keep people off for half an hour, Sergeant. The urgent part of this correspondence simply must be cleared off before I start for W—."

SWITZERLAND is to be the main "jumping-off" ground for the post-war Peaceful Penetration Hun, camouflaged under Swiss nationality. The *Tribune de Genève* notes that from 1803, the date of the birth of the Canton of Vaud, up to the end of August, 1918, the total of naturalisations there was 2,413. The newspapers have recently stated that since the beginning of the present war the single Canton of Zurich has granted more than 15,000 naturalisations, *mostly Germans* (the italics are ours). The Swiss-German has for many years been a well-known blot upon the landscape, a bit more virulent even than the hyphenated variety of the past in Yankee-land. But it looks as if his activities from the land of the Yodler are to be increased many fold in the future, and we commend this source of "leakage" in post-war commercial relationship as one worthy of very high "watching brief" rank by those who are to see to it that German goods shall not masquerade as British or any other make than what they really are.

To Pay Income Tax.

A NUMBER of employees at the Royal Aircraft Factory, Farnborough, stated to be earning an average of from £8 to £10 weekly, were ordered at Aldershot on September 12th to pay their income tax by instalments.

Germany Shifting Gotha Aerodromes.

FROM a correspondent at Dunkirk the *Journal* learns that large quantities of material, especially from the arsenal at Douai, have been methodically removed by the Germans during the last fortnight. They have also removed to the rear the material from the aerodrome at Brayelle. The material at the aerodrome of Leceiles, near St. Amand, from which most of the Gothas which visited Channel towns started, has also been taken further to the rear.

Germany's Fright of Aerial Propaganda.

FROM a frontier correspondent the *Amsterdam Telegraaf* learns that the German commander at Ghent, Major von Blücher, has issued a proclamation to the inhabitants,

threatening them with a fine of £150 or one year's imprisonment, or both, if they fail to hand over immediately any literature dropped by airmen in Belgium. The correspondent adds:—

"I have seen a copy of a newspaper printed in London and entitled *Le Courrier de l'Air*. With a small piece of lead attached, it was thrown out of some flying machine, as the inscription 'By balloon' indicated. The newspaper contained war news, a review of the French offensives, and of the situation in Germany.

"The Belgian population is of course eager to take up, read, and spread such literature dropped from the air. But the Germans want to keep all uncensored news out of the occupied territory. Hence the proclamation of the German commander.

"Leaflets destined for German soldiers are also thrown out of aeroplanes. One I saw, for instance, consisted of letters from German prisoners of war, telling of their good treatment in British and French prisoner of war camps."

Personals

Casualties.

SEC. LIEUT. VICTOR GEORGE BRINDLEY, R.A.F., who was killed on August 30th, was 27 years of age, and elder son of Mr. and Mrs. G. J. Brindley, of Kopjes, South Africa. He was educated at Mill Mead, Shrewsbury, and Oundle. When war broke out he joined the Forces under General Botha, and went through the South African campaign. Afterwards he came to England with a battalion of South African Infantry, fought in Egypt, and then went to another front, where he was in the trenches for about 15 months, taking part in several of the chief engagements. Later, he obtained a commission in the R.A.F., and returned to the front on July 14th last.

CAPT. GEOFFREY SEBASTIAN BUCK, M.C., D.F.C., R.A.F., who was killed on September 3rd, aged 21, was the eldest son of Dr. and Mrs. Percy C. Buck, of Harrow-on-the-Hill. He was educated at Mr. Lynam's, Oxford, and at Winchester (Mr. Bell's House), and played in the Eton and Winchester cricket match in 1914. Gazetted as Second Lieutenant to the Royal Fusiliers in November, 1914, he served with them in France till July, 1916, when he joined the R.F.C.

SEC. LIEUT. JASPER EDMUND CAVE, R.A.F., who was killed on August 14th, was the only son of Mr. Edmund Cave, of 86, Hatton Garden, solicitor, and Mrs. Cave, and a nephew of Sir George Cave, the Home Secretary. At the outbreak of the war he was managing a fruit ranch in British Columbia, where he had gone for the benefit of his health, but volunteered and was accepted for service in the Canadian Seaforth Highlanders. After landing in England he applied for transfer to the Air Service, and was granted a commission in the R.A.F. While showing a pilot over the line he was seen in aerial combat with an enemy machine, and later both machines were observed to fall out of control.

LIEUT. CYRIL PARTINGTON, Royal Warwickshire Regt., attached R.A.F., who was killed in action on August 30th, was the eldest son of Walter Partington, 6, Pownall Gardens, Hounslow. His age was 22.

LIEUT. THOMAS PIM, R.F.A., attached R.A.F., who was killed on August 28th, aged 20, was the elder son of Mr. and Mrs. Cecil Pim, of Willow Bank, Kingstown, Dublin. He was educated at Bilton Grange and Wellington, and passed into the Royal Military Academy in September, 1914, receiving his commission in April, 1915. He served in Gallipoli, Egypt, and since June, 1916, on another front.

SEC. LIEUT. J. ORMONDE BUTLER, R.A.F., who died on April 11th (as a prisoner of war) from wounds received while flying at the front, was the only son of the Rev. R. M. P. and Mrs. Butler, of Preston Rectory, Bath, and was educated at Harrow, where he was the head of his house (the Headmaster's). He had also entered at Trinity College, Cambridge, but took up a commission at the end of last year, and went to the front at the beginning of January.

MAJOR AUDSLEY RALPH CARTER, R.G.A., attd. R.A.F. who died of wounds on August 28th, aged 24, was the third and youngest son of Dr. and Mrs. Godfrey Carter, of Sheffield.

LIEUT. HAROLD BELFIT HILL, Royal West Kent Regt. and R.A.F., who was killed in a flying accident on September 6th, aged 24, was the second son of William Hill, Briars, Nuneaton, late of Polesworth.

LIEUT. FREDERICK ROBERT JENNINGS, R.A.F., who died on September 2nd, at a hospital abroad, aged 19, was the youngest son of Mrs. Jennings, Croft Road, Crowborough.

LIEUT. GERALD HUGH SMYTH, R.A.F., who was killed in a flying accident on September 5th, aged 21, was the eldest son of Mr. and Mrs. John Smyth, of Cambridge. He was educated at the Perse School, Cambridge. He was keenly interested in flying, but, being unable at the age of 16 to take up a commission, he joined the R.N. armoured cars, under Comdr. Locker-Lampson, seeing service with them in Belgium, France, Russia, Turkey, Roumania, Galicia, and the Caucasus. On his return to England after the revolution in 1917, he obtained a commission in the R.N.A.S., and got his wings in August. On September 5th, six hours before leaving for the front, he was accidentally killed. For his services rendered in Russia he was awarded the Russian St. Stanislas medal and the medal of St. Ann.

FLT. LIEUT. CECIL GWYN SUTTON-JONES, R.A.F., who was killed while flying on September 11th, aged 28, was the only

son of Mrs. Gie Sutton-Jones, and the late Lieut.-Col. G. Sutton-Jones, Bhopal Battalion.

LIEUT. CECIL FREDERICK JOHNSTONE THOMPSON, R.A.F., who was accidentally killed on September 6th, whilst flying, aged 21, was the only son of Mr. E. J. Thompson, of the Stationery Office.

SEC. LIEUT. CHARLES EVANS THORP, R.A.F. (late 2nd Batt. Artists' Rifles), who died on August 30th, of wounds received in action that day, aged 19, was the elder son of Mr. and Mrs. A. Evans Thorp, of 9, Queen's Road, Leytonstone, E. 11.

SEC. LIEUT. CYRIL JOHN TOWLER, Royal West Kent Regt., attd. R.A.F., who was killed on September 4th in a flying accident, aged 22, was the son of Mr. and Mrs. F. Towler, of Seaford.

Married.

MAJ. ARTHUR W. FARRER, R.A.F. second son of Mr. John Farrer, Crouch End, N., was married on September 11th at St. Peter's-upon-Cornhill, to ETHEL FLORENCE, eldest daughter of Mr. and Mrs. CARLTON ROBERTS, Golders Green, N.W.

HENRY EDWARD HAZLEHURST, King's Own (Liverpool) Regt., attd. R.A.F., was married on September 12th, at Bath, to CICELY, only daughter of the late W. A. W. LAST, Indian Civil Service and Maj., United Provinces Light Horse, and Mrs. Last, of Leamsford House, St. Albans.

LIEUT. GEOFFREY T. LEGGE, R.A.F., only son of Mr. and Mrs. J. T. Legge, of Croydon, was married on September 11th at Sanderstead to VERA, third daughter of Mr. and Mrs. H. F. STOKES, of Sanderstead.

LIEUT. MYLES J. RANDAL MACDONNELL, R.A.F., late Leinster Regt., R.C., eldest son of Mr. and Mrs. MacDonnell, of Ivy Gates, Berkhamsted, Herts, was married on September 14th, at the Parish Church, Berkhamsted, Herts, to GWENDOLINE, daughter of Mrs. S. F. TUNSTALL, of Vancouver, B.C.

CAPT. ROBERT OXSPRING, M.C., K.O.Y.L.I. and R.A.F., son of Mr. and Mrs. Joseph E. Oxspring, of Wardsend House, Sheffield, was married on September 11th at the United Methodist Church, Surrey Street, Sheffield, to GLADYS, elder daughter of MARMADUKE WARDLOW, J.P., and Mrs. Wardlow, of West Royd, Sheffield.

MAJ. CYRIL C. WIGRAM, R.A.F., younger son of the late H. J. Wigram, Esq., and Mrs. Wigram, of Northlands, Salisbury, was married by special licence recently to OLIVIA MARIE, daughter of the late Maj.-Genl. W. TRUMAN and Mrs. Truman, of Winterbourne, Bonchurch, Isle of Wight.

To be Married.

A marriage has been arranged, and will shortly take place, between Major E. T. NEWTON-CLARE, D.S.O., R.A.F., formerly Squadron Commander, R.N.A.S., eldest son of Mrs. W. H. Haworth, The Ferns, Beckenham, Kent, and Miss AILEEN SWANN, A.R.R.C., elder daughter of Major-Gen. J. C. Swann, C.B., The Pickets, Great Missenden, Bucks.

Items.

Capt. DAVID GRAY, Pioneers and R.A.F., and Sec. Lieut. C. KENNARD, R.A.F., had the honour of being received by the King at Windsor Castle on September 12th.

THE Mayor of Gillingham, Alderman W. H. Griffin, on September 4th presented Mrs. McCudden with an illuminated certificate of the freedom of the borough of Gillingham, which could not be personally conferred upon her son, Major JAMES BYFORD MCCUDDEN, V.C., D.S.O., D.F.C., M.C., D.C.M., M.M., who was accidentally killed in France on July 9th. The certificate was enclosed in a silver casket, which bore the arms of Gillingham and of the Royal Flying Corps, together with the following inscription:—"Presented to Captain James Byford McCudden, a native of Gillingham, in recognition of the great services rendered by him to his country and as a mark of appreciation of his fellow-townsmen of his bravery in the face of the enemy." Accompanying the certificate of freedom was a bundle of War Bonds and Treasury notes value £114, the gifts of the townspeople of Gillingham. Mrs. McCudden made a short speech in acknowledgment.

Mrs. GWYNNE-VAUGHAN, the new commandant of the W.R.A.F., was head of the Botany Department at Birkbeck College from 1909 till her appointment as Controller of the W.A.A.C. She was a distinguished former student of King's College.

THE ROYAL AIR FORCE

London Gazette, September 10th.

The following temporary appointments are made at the Air Ministry:—
Inspector-General.—Maj.-Gen. Sir G. M. Paine, K.C.B., M.V.O.; Aug. 22nd.
Master-General of Personnel.—Maj.-Gen. W. S. Brancker, A.F.C.; Aug. 22nd.
Controller-General of Equipment.—Maj.-Gen. E. L. Ellington, C.M.G.; Aug. 22nd.

Staff Officer, 2nd Class.—Lieut. (Temp. Capt.) E. B. Barker, and to be Temp. Maj. while so employed, vice Capt. (Temp. Maj.) H. J. de C. Moore, who now relinquishes the temp. rank of Maj.; Sept. 1st.

The following temporary appointments are made:—

Brigade Commander.—Lieut.-Col. (Temp. Brig.-Gen.) E. R. Ludlow-Hewitt, D.S.O., M.C., and to retain his temp. rank while so employed; May 23rd.

Staff Officers, 2nd Class.—And to be Temp. Maj. while so employed, if not already holding that rank:—A. T. A. Dobson (Lieut., Hamps. R.), and is granted a temp. commn. as Lieut.; June 30th (Air.). Capt. C. B. Krabbe, vice Capt. (Temp. Maj.) H. W. M. Paul, M.C.; June 29th. Capt. R. B. C. M. T. de Poix; July 1st (P.). F. H. L. Errington, C.B. (Lieut.-Col., T.F. Res.), and is granted a temp. commn. as Maj., and to be Hon. Lieut.-Col.; Lieut. F. J. Lees; April 6th. F. S. A. Baker (Capt., Sea. Highrs.), and is granted a temp. commn. as Capt.; April 10th. B. W. Bentinck (Temp. Capt., Gen. List New Armies), and is granted a temp. commn. as Capt.; May 5th. D. L. Ingpen (Temp. Capt., Gen. List, New Armies), and is granted a temp. commn. as Capt.; May 28th. H. S. Morris (Lieut., C. Gds., S.R.), and is granted a temp. commn. as Lieut.; June 25th. Lieut. (Temp. Capt.) E. J. Briscoe; Aug. 1st.

Staff Officers, 3rd Class.—And to be Temp. Capt. while so employed, if not already holding that rank:—Capt. G. C. Corry-Smith; June 1st (Air.). H. R. P. Reynolds (Bt. Maj., R.E.), and is granted a temp. commn. as Capt., and to be Hon. Maj.; May 17th. Lieut. D. F. Cox; Aug. 15th. (P.).—L. M. Boddam-Whetham (Capt., R.W. Surr. R.), and is granted a temp. commn. as Capt.; June 16th. C. E. J. Trafford, M.C. (Lieut., S. Gds., S.R.), and is granted a temp. commn. as Lieut.; Aug. 1st.

Flying Branch.

Capt. A. S. Maskell to be Temp. Maj. while employed as Maj. (A.); Sept. 10th.

Lieuts. (Hon. Capt.) to be Temp. Capt. while employed as Capt. (A.):—W. D. Jackson, T. K. Thynne, W. S. Wilson; Aug. 1st.

Lieuts. to be Temp. Capt. while employed as Capt. (A.):—S. Jones; Sept. 3rd. C. A. Brown, G. J. H. Lascelles, N. F. Northam, R. W. Reid, M.C., G. W. Shuter, C. A. F. Whitley, M.C., F. G. S. Williams; Sept. 5th.

Capt. (Temp. Maj.) H. A. Smith, M.C., relinquishes his temp. rank on reversion to Capt. (A.) from (S.O.); Sept. 3rd.
 Lieut. N. McN. Beaton to be Temp. Capt. while employed as Capt. (K.B.); Aug. 26th.

Capt. D. C. Ware reverts to Lieut. (A.) at his own request; Aug. 7th.
 Lieuts. to be Lieuts. (Dir.):—H. A. Edridge-Green, from (Ad.); A. D. Light, from (O.); Aug. 26th.

Lieut. (Temp. Capt.) E. L. B. Buchanan to be Lieut. (Temp. Capt. (Dir.) from (K.B.); July 17th.

Lieuts. (K.B.) to be Lieuts. (Dir.):—W. A. Lane, T. G. Greenwall; July 17th.

Sec. Lieuts. (late Gen. List, R.A.F., on prob.) are confirmed in their rank as Sec. Lieuts. (A. and S.):—M. Bearman; May 24th. N. Farson; June 25th. W. H. Bayley; June 29th. R. A. Caldwell; July 31st. W. F. Simpson; Aug. 6th. C. F. Cave; Aug. 10th. J. L. Airey; Aug. 11th. C. Davidson, H. J. Challis, J. Mackintosh; Aug. 12th. F. H. Hall, H. McClunan, F. B. Peacock, D. McKellar; Aug. 13th. R. A. Eldridge, B. E. Taylor, A. T. Taylor; Aug. 16th. B. M. Evans; Aug. 17th.

The following Prob. Flight Officers (late R.N.A.S.) are granted temp. commns. as Sec. Lieuts. (A. and S.):—R. M. Bennet, W. O. Jones, J. R. Barrett, A. H. Hull, E. F. Mattock, O. A. Kempe, R. W. Walls, A. M. Perrins, J. M. Welshman, W. F. A. Snell, P. G. Deedes, V. C. S. Bach, W. Smith, H. Copper, D. E. Culver, E. G. Woods; May 15th. H. C. E. Adlard, T. B. Anderson; Aug. 6th. J. A. Phillips; Aug. 10th. R. L. Bonham, J. M. Catto; Aug. 12th. H. F. Mulhall; Aug. 14th. R. N. Riddell, G. A. Ballantyre; Aug. 15th. W. Manning, M. Whitehead, W. J. Kelly, W. R. O. Midgeley; Aug. 17th.

The following are granted temp. commns. as Sec. Lieuts. (A. and S.):—B. W. Cotterell (Sec. Lieut., Notts. and Derby R., S.R.); Aug. 10th. E. J. Leedle (Temp. Lieut., E. Yorks. R.), and to be Hon. Lieut.; E. G. Birkbeck, M.C. (Lieut., N. Staff. R.), and to be Hon. Lieut.; Aug. 11th. F. L. Johnson, M.M. (Cent. Ont. R., C.E.F.), and to be Hon. Lieut.; F. A. Markham (Lieut., R. Lanc. R., S.R.), and to be Hon. Lieut.; Aug. 12th. D. J. Lewis (Sec. Lieut., York. R., S.R.), H. A. Francis (Lt., Brit. Col. R., C.E.F.), and to be Hon. Lieut.; Aug. 13th. J. Brewster (Sec. Lieut., R. Berks. R.); Aug. 14th. W. H. A. Monckton (Temp. Sec. Lieut., K.R.R.C.); Aug. 15th. T. Hargreaves (Temp. Sec. Lieut., E. Lanc. R.), K. G. Welch (Sec. Lieut., R.G.A., T.F.), H. G. Watson (Temp. Capt., Manch. R.), and to be Hon. Capt.; Aug. 17th.

The following Flight Cadets are granted temp. commns. as Sec. Lieuts. (A. and S.):—W. J. McDonough; July 9th. T. Madoc-Jones; July 19th. B. Louttit; July 26th. P. Bebbington, S. B. Atkinson; Aug. 23rd. H. C. Murray, J. B. Richardson, G. M. Miller, A. H. Gooch, A. J. M. Ozmon, W. G. Walters, S. Lee; Aug. 24th. G. L. Smith, W. R. N. Whiston, J. B. Macintyre, W. Taylor, L. G. Stockwell, F. A. Hickson; Aug. 25th. N. G. Forester, B. J. Forester, H. C. Parks, A. S. Birss, J. C. Urquhart, T. S. Anderson, E. Tomkins, T. D. Edgar, A. Avery, C. Tomlinson; Aug. 26th. E. R. Walker, D. Croft, H. F. Barlow; Aug. 27th. C. R. Wolfendale; Aug. 28th. G. W. Moore; Aug. 29th.

The following Sec. Lieuts. (late Gen. List, R.F.C., on prob.) are confirmed in their rank as Sec. Lieuts. (Dir.):—S. Vaughan, F. Van Praagh; July 17th. J. Gibson; July 23rd.

The following Prob. Flight Officers. (late R.N.A.S.) are granted temp. commns. as Sec. Lieuts. (Dir.) (substituted for notification in *Gazette*, May 7th):—L. E. F. Dale, C. S. W. Hall; April 10th. L. D. Brown, W. N. Shuttleworth; April 17th. D. G. Wassell, J. A. E. Steel; April 26th.

The following Prob. Flight Officers (late R.N.A.S.) are granted temp. commns. as Sec. Lieuts. (Dir.):—B. N. Radford; April 3rd. C. W. Seymour-Hall; April 10th. G. H. A. Cordwell, H. Perkins, E. R. Sanderson, I. M. M. Perman; May 15th. C. G. J. Whiteside, C. F. Lamb, A. Patchett, C. H. Bingham; May 27th. L. Goater, J. R. Heming, F. S. Jones; May 29th. J. H. L. Kirby; June 10th. C. W. S. James; June 24th. W. K. Crockett, W. L. Andrews, A. G. Hatton, R. Hooley; June 26th. M. F. R. Plowman; July 17th. G. W. Goodwin, L. S. Collard, F. F. G. Hepworth, A. T. Batchelor, J. O. F. Carrall; July 31st. R. R. Mutton, P. C. Drummond, W. W. Ruddock; Aug. 13th.

The following are granted temp. commns. as Sec. Lieuts. (Dir.):—R. F. Saunders (Sec. Lieut., R.W. Surr. R., T.F.); V. A. Peers (Temp. Sec. Lieut., R. War. R.); June 24th.

The following Sec. Lieuts. (late Gen. List, R.F.C., on prob.) are confirmed

in their rank as Sec. Lieuts. (K.B.):—W. D. Allan; Aug. 15th. A. E. Hopkins, T. C. Lewis, N. L. Mayle; Aug. 20th.

The following Prob. Flight Officers (late R.N.A.S.) are granted temp. commns. as Sec. Lieuts. (K.B.):—H. M. W. Cuthbert, P. Cunningham; July 23rd. V. C. D. Kent; Aug. 7th.

The following are granted temp. commns. as Sec. Lieuts. (K.B.):—W. Coker (Lieut., E. Surr. R.), and to be Hon. Lieut.; H. V. Drew (Temp. Lieut., attd. Yorks. L.I.), and to be Hon. Lieut.; Aug. 1st. J. J. T. Rose (Lieut., Oxf. and Bucks L.I., S.R.), and to be Hon. Lieut.; J. H. Gray (Temp. Sec. Lieut., Linc. R.); Aug. 20th.

The following Sec. Lieuts. (late Gen. List, R.F.C., on prob.) are confirmed in their rank as Sec. Lieuts. (Obs. Officers):—A. Sykes, J. Spencer; April 1st. W. G. L. Bodley; May 21st. F. E. Peters; May 25th. C. Sweetman; June 1st. A. H. Watters, J. P. Armitage, J. Stott, J. Miller, A. K. Barter; Aug. 16th. S. St. C. Stone, H. S. Orange; Aug. 23rd. V. T. Harwood; Sept. 7th.

Prob. Observer Officer A. P. Knightsbridge (late R.N.A.S.) is granted a temp. commn. as Sec. Lieut. (Obs. Officer); April 30th.

The following are granted temp. commns. as Sec. Lieuts. (Obs. Officers):—G. R. Harrison (Lieut., N. Brunswick R., C.E.F.), and to be Hon. Lieut., A. G. Smalley (Lieut., W. Rid. R., T.F.), and to be Hon. Lieut., E. A. Westall (Sec. Lieut., Sco. Rif.), G. J. L. Campbell (Sec. Lieut. Lond. R., T.F.), H. A. Pike (Temp. Sec. Lieut., attd. S. Lan. R.), L. R. McKenna (Lieut., E. Ont. R., C.E.F.), and to be Hon. Lieut., C. R. Goss (Lieut., Manitoba R., C.E.F.), and to be Hon. Lieut.; April 1st. C. A. Hutchins (Temp. Sec. Lieut., Glouc. R.); April 6th. W. G. Hanton (Temp. Sec. Lieut. Lond. R., T.F.); April 7th. D. S. St. A. McCulloch (Sec. Lieut., Dorset R., S.R.), R. J. R. Ward (Temp. Sec. Lieut., Leic. R.); April 16th. R. F. Casey (Temp. Sec. Lieut., attd. R. Innis. Fus.); May 1st. J. A. Whalley (Temp. Sec. Lieut., Lab. Corps); May 16th. H. Jones (Temp. Lieut., Welsh R.), and to be Hon. Lieut., W. E. Crombie, M.C. (Lieut., R. War. R., T.F.), and to be Hon. Lieut., S. E. Towill (Lieut., Yorks. Hrs. Yeo., T.F.), and to be Hon. Lieut., G. W. Mitchell (Temp. Lieut., E. York. R.), and to be Hon. Lieut.; Aug. 16th. C. H. Thompson (Sec. Lieut., York and Lanc. R., T.F.), G. G. Bannerman (Temp. Lieut., R.E. (I.W.T.), and to be Hon. Lieut., H. S. Gargett (Lieut., Durh. L.I., T.F.), and to be Hon. Lieut., G. McCormack (Temp. Lieut., K. Ir. Rif.), and to be Hon. Lieut., R. S. E. Walshe (Sec. Lieut., R. War. R., T.F.); Aug. 22nd. W. S. Woodall (Temp. Sec. Lieut., attd. North'n R.), C. T. Linford (Temp. Lieut., Res. R. of Cav.), and to be Hon. Lieut., A. N. Eyre (Lt., Notts and Derby R., T.F.), and to be Hon. Lieut., A. H. Penstone (Sec. Lieut., R. Suss. R., T.F.), A. C. Heyes (Temp. Sec. Lieut., R. Fus.), M. E. Barlow (Temp. Sec. Lieut., Manch. R.), J. W. Davies (Sec. Lieut., Glouc. R., T.F.), J. H. Perring (Temp. Sec. Lieut., attd. Welsh R.), C. R. Cook (Temp. Lieut., Shrops. L.I.), and to be Hon. Lieut., H. S. Slinger (Temp. Sec. Lieut., L'pool R.), E. W. A. G. Middlecote (Temp. Sec. Lieut., K.R.R.C.); Aug. 23rd. T. I. Hill, M.C. (Lieut., Essex. R., T.F.), and to be Hon. Lieut.; Sept. 7th.

The following Flight Cadets are granted temp. commns. as Sec. Lieuts. (Obs. Officers):—H. L. Jones; Aug. 31st. O. W. Clarke, F. R. Eveleigh, A. Woodward, J. H. Hall, E. J. Thompson, C. H. L. Needham, R. H. Cole, W. R. Dallas, J. F. Russel, G. E. Williams, C. C. Eaves, W. J. Boon, C. A. Spooner, A. Russell, J. B. Robson, B. Riley, S. Perkins, F. Reay, R. F. Tomlinson, R. V. Richardson, J. W. Robertson, G. H. Carr, S. Whitehead, P. L. Strangeward, P. J. Swan-Taylor, B. Heaton, S. L. Simpson, W. T. S. Cairns, N. C. B. Carrick, H. D. Beresford, R. Whitfield, J. H. Fitz-Gerald, G. F. Robinson, J. C. Marlon, E. P. Sansom, A. Taylor, F. L. McHenry, W. R. Tomlinson, J. W. Sampson; Sept. 7th. C. D. Macdonald, J. W. Neil, E. S. Oxley, R. S. Stainsby, C. C. Salmon, W. H. Tyler, F. W. Woolley, J. Warren, L. Wilson, G. W. Wadison; Sept. 9th.

Sec. Lieut. (A.) C. A. James is dismissed the service by sentence of a General Court-Martial; Aug. 31st.

Lieut. (Hon. Capt.) E. S. Boynton relinquishes his commn. on account of ill-health, and is granted the hon. rank of Capt.; Sept. 11th.

The following Lieuts. relinquish their commns. on account of ill-health contracted on active service, and are granted the hon. rank of Lieut.:—E. H. Lascelles, W. Perkins; Sept. 11th.

Lieut. (Hon. Capt.) H. J. Bath resigns his commn. and is granted the hon. rank of Capt.; Sept. 11th.

Sec. Lieut. L. T. A. Robinson relinquishes his commn., having been found permanently unfit for further instructions as pilot or observer; Sept. 11th.

The notification in *Gazette* Aug. 23rd, concerning Sec. Lieut. G. H. Brown is cancelled.

The surname of F. Cadet Arthur Whichelow is as now stated and not as in *Gazette* July 23rd (substituted for notification in *Gazette*, Aug. 30th).

Administrative Branch.

Maj. F. A. G. Noel to be Temp. Lieut.-Col. whilst employed as Lieut.-Col.; May 28th.

Lieuts. to be Temp. Capt. whilst employed as Capt.:—J. S. Curtis; June 1st. A. W. Turner; June 13th.

Sec. Lieut. W. R. Fairbairn to be Temp. Capt. whilst employed as Capt.; June 13th.

Sec. Lieut. (Hon. Lieut.) M. C. Caley to be Lieut.; April 25th.

Sec. Lieuts. to be Temp. Lieuts. whilst employed as Lieuts.:—R. A. C. Craddock-Hartopp; June 13th. D. H. Etheridge; Aug. 28th.

Lieuts. (O.) to be Lieuts.:—C. E. Channing, H. G. Wildbore, M.C.; June 13th.

Lieut. A. Watson to be Lieut. from (A.); Aug. 27th.

Lieut. F. L. Simmons to be Lieut. from (K.B.); Sept. 8th.

Sec. Lieut. G. L. McLean (late Gen. List, R.F.C., on prob.) is confirmed in his rank as Sec. Lieut.; Aug. 23rd.

The following are granted temp. commns. as Sec. Lieuts.:—O. W. Owen (Sec. Lieut., attd. S. Wales Bord.); June 23rd. H. N. Turner (Temp. Sec. Lieut., Labour Corps); July 19th. S. O. Saville (S.-Lieut., R.N.V.R.); July 20th. E. Staples (Sec. Lieut., Linc. R., T.F.); Aug. 19th. A. E. H. Hales (Temp. Sec. Lieut., R.E.); Aug. 21st. P. A. Shaw; Sept. 4th. F. O. Finn, T. Mitchell, S. R. Lewis, L. A. Parker, H. Randall, L. A. Briggs, R. L. Wills; Sept. 7th. R. C. Hill, C. F. P. Davies; Sept. 9th.

Sec. Lieut. A. W. M. Eryant to be Sec. Lieut., from (A. and S.); Aug. 23rd.

Sec. Lieuts. (Tech.) to be Sec. Lieuts.:—R. K. McLean; July 1st. F. E. Hudson; Aug. 8th.

Capt. (Temp. Maj.) G. L. Main is removed from the Service, the King having no further occasion for his services as an officer; June 3rd.

Sec. Lieut. (Hon. Lieut.) A. W. Hughes relinquishes his commn. on account of ill-health contracted on active service, and is granted the hon. rank of Lieut.; Sept. 11th.

Sec. Lieut. E. H. Cree relinquishes his commn. on account of ill-health contracted on active service, and is granted the hon. rank of Sec. Lieut.; Sept. 11th.

The following Sec. Lieuts. relinquish their commns. on account of ill-health and are granted the hon. rank of Sec. Lieut.:—A. A. Chapman, W. E. Clarke H. Saville; Sept. 11th.

Sec. Lieut. T. Bathurst resigns his commn.; Sept. 11th.
The notification in *Gazette*, June 20th, concerning R. W. Simpson is cancelled.

Technical Branch.

Maj. (Temp. Lieut.-Col.) Lord A. R. Innes-Ker, D.S.O., retains his temp. rank while employed as Lieut.-Col., from (A. and S.); June 13th.

To be Temp. Maj. while employed as Maj.:—Capt. I. O. Griffith, Lieut. (Temp. Capt.) W. C. Mitchell; June 21st.

Lieuts. to be Temp. Capt. while employed as Capt.:—(Hon. Capt.) D. A. English; April 26th. M. Campbell, from (A. and S.); June 13th. J. Page; Aug. 1st.

Capt. O. S. Moseley-Leigh to be Capt., from (Ad.); June 13th.

Sec. Lieuts. (Hon. Lieuts.) to be Temp. Lieuts. while employed as Lieuts.:—S. A. Alder; Aug. 28th. R. A. Law; Sept. 4th.

Lieut. W. S. Mathews to be Lieut., from (A. and S.); June 13th.

Lieuts. (O.) to be Lieuts.:—S. W. Bunting, S. J. Hunter, E. H. Wilson; June 13th.

Lieuts. (A. and S.) to be Sec. Lieuts. and to be Hon. Lieuts.:—T. M. O'Neill; Aug. 17th. A. Ginger; Aug. 28th.

The following Sec. Lieuts. (late Gen. List, R.F.C., on prob.) are confirmed in their rank as Sec. Lieuts.:—E. T. Fountain; June 22nd. F. C. King; July 5th. E. A. O. Hobart-Hampden; Aug. 10th.

Sec. Lieuts. (Admin.) to be Sec. Lieuts.:—T. G. Callard; June 10th. H. S. Adams, J. H. Everett, C. L. Champion; Aug. 24th.

Sec. Lieut. H. Grant to be Sec. Lieut., from (Obs. Officer); July 1st.

Lieut. R. Kearton to be Sec. Lieut. and to be Hon. Lieut. from (Obs. Officer); Aug. 22nd.

The following are granted temp. commns. as Sec. Lieuts.:—C. W. Burgess (Temp. Lieut., New Armies, Gen. List) and to be Hon. Lieut.; June 21st. C. D. de Pinna (Lieut., Lond. R., T.F.), and to be Hon. Lieut.; June 28th. C. H. Macnutt (Lieut., Can. Engrs., C.E.F.), and to be Hon. Lieut.; July 24th. H. F. M. Nash (Temp. Lieut., E. Surr. R.), and to be Hon. Lieut.; Aug. 3rd. T. H. White (Lieut., Hamps. R., S.R.), and to be Hon. Lieut.; Aug. 10th. C. Parker (Temp. Lieut., M.G.C.), and to be Hon. Lieut.; Aug. 11th. T. G. S. Babb (Lieut., R.E., T.F.), and to be Hon. Lieut.; Aug. 13th. F. White (Temp. Sec. Lieut., R.E.); Aug. 24th.

Maj. (Temp. Lieut.-Col.) G. C. R. Mumby is dismissed the Service by sentence of a General Court-martial; Sept. 11th.

Lieut. (Temp. Capt.) T. Holmes relinquishes his commn. on account of ill-health, and is granted hon. rank of Capt.; Sept. 11th.

Lieut. D. B. James relinquishes his commn. on account of ill-health contracted on active service, and is granted hon. rank of Lieut.; Sept. 11th.

The following Sec. Lieuts. relinquish their commns. on account of ill-health and are granted the hon. rank of Sec. Lieuts.:—S. E. Brett, P. E. Jeffcock; Sept. 11th.

Medical Branch

J. N. Medonald (late Capt., R.A.M.C.) is granted a temp. commn. as Capt.; Sept. 7th.

T. M. Davies is granted a temp. commn. as Lieut.; Sept. 9th.

Medical Branch (Admin.)

H. J. Beale is granted a temp. commn. as Sec. Lieut.; Sept. 9th.

Memoranda.

Lieut. R. E. Johnson is granted the temp. rank of Capt. while employed as a Staff Officer, 3rd Class; June 25th.

Sec. Lieut. (Hon. Lieut.) A. Ward is granted the temp. rank of Capt. (without pay and allowances of that rank) while holding a special appointment under the Ministry of Munitions; Aug. 25th.

The date of appointment of Maj. (Hon. Lieut.-Col.) V. A. F. V. Russell is April 5th, and not as stated on page 9383 of the *Gazette*, Aug. 9th.

The date of appointment of Capt. W. S. Evans is May 24th, and not as in *Gazette*, Aug. 6th.

Capt. (Temp. Maj.) C. H. Rome relinquishes his commn. on account of ill-health contracted on active service; Sept. 11th.

London Gazette, September 14th.

The following temporary appointment is made at the Air Ministry:—
Staff Officer, 1st Class.—(P.)—Capt. (Temp. Lieut.-Col.) W. O. Raikes, M.B.E., and to retain his temp. rank whilst so employed, vice Maj. (Temp. Lieut.-Col.) W. J. Ryan, M.B.E.; Sept. 2nd.

The following temporary appointments are made:—
Group Commander.—Lieut.-Col. F. H. Kirby, V.C., D.C.M., and to be Temp. Col. whilst so employed, vice Lieut.-Col. (Temp. Col.) R. H. Collier, D.S.O., who relinquishes the temp. rank of Col.; Aug. 27th.

Staff Officers, 1st Class.—And to be Temp. Lieut.-Cols. whilst so employed, if not already holding that rank:—Maj. T. E. Gilmore; June 1st. (P.)—Maj. (Temp. Lieut.-Col.) W. J. Ryan, M.B.E.; Sept. 2nd. (T.)—Maj. (Temp. Lieut.-Col.) R. W. Roylance; May 15th.

Staff Officers, 2nd Class.—And to be Temp. Maj. whilst so employed, if not already holding that rank:—(P.)—Maj. A. Corbett-Wilson, Maj. H. Dodd, Capt. A. E. Hawker, Capt. C. V. Hewson, Lieut.-Col. J. W. L. Hunt, Capt. E. R. Whitehouse, Capt. N. V. Wrigley; Aug. 20th.

Staff Officers, 3rd Class.—Capt. T. L. Tillie; June 1st. (Air.)—Capt. W. J. Salaman, vice Lieut. (Temp. Capt.) S. J. Smith; July 17th.

Flying Branch.

Capt. (Temp. Maj.) A. K. Tylee to be Temp. Lieut.-Col. whilst employed as Lieut.-Col. (A.); April 1st.

Lieut. (Temp. Capt.) C. W. Scott to be Temp. Maj. whilst employed as Maj. (A. and S.); Aug. 23rd.

Capt. H. de V. Leigh to be Temp. Maj. while employed as Maj. (S.); Sept. 6th. Lieuts. to be Temp. Capt. while employed as Capt.:—(A.) (Hon. Capt. A. M. FitzRandolph; Aug. 8th. J. L. White, D.F.C.; Aug. 9th. E. H. P. Cave, E. D. Fanshawe, S. G. Frogley, H. R. Gardner, R. V. Gove, B. H. Hunt, A. G. Lamplugh, C. E. W. Lockyer, A. D. Makins, S. P. Marcus, W. Sharpe; Aug. 10th. T. W. Nash; Aug. 13th. A. Rice-Oxley, D.F.C.; Aug. 15th. W. Grossart, D. R. Mackie, M.C., F. R. Offord, J. J. Williamson; Aug. 23rd. B. G. H. Keymer; Aug. 28th. A. R. Cross, B. A. S. Lewis; Aug. 30th. A. W. Vigers, M.C.; Sept. 1st. H. P. Lloyd, M.C.; Sept. 6th.

Capt. (Temp. Maj.) G. Disney relinquishes his temp. rank on reversion to Capt. (K.B.) from (S.O.); Aug. 26th.

Lieut. (Hon. Capt.) J. A. Macnab to be Temp. Capt. while employed as Capt. (O.); Aug. 1st.

Lieut. (Hon. Capt.) J. Hodson to be Temp. Capt. while employed as Capt. (S.); Aug. 8th.

Lieuts. (Obs. Officers) to be Lieuts.:—(A. and S.) E. R. Bruce; Aug. 1st. J. A. Stedman; Aug. 10th. W. P. Busher; Aug. 17th. F. Shingleton; Aug. 18th. G. G. Williams; Aug. 20th. J. T. Richardson; Aug. 23rd. (Hon. Capt.) J. R. Walker, and to be Hon. Capt.; Aug. 23rd. E. O. Houghton; Aug. 24th. N. S. Dewey, M.C.; Aug. 26th.

Capt. H. F. Alton to be Lieut. (A. and S.), and to be Hon. Capt., from (T.); Aug. 27th.

The following Flight Cds. are granted temp. commns. as Sec. Lieuts.:—(A.) A. E. Willis; Aug. 26th. C. M. Doolittle, L. A. Stammer, S. G. Smith, C. C. Fox; Aug. 27th. E. S. Adamson, T. Lamb, J. W. Sandham; Aug. 28th. B. L. Clift, W. Baldwin, G. C. Rainbow, R. Stuart, D. S. Huskisson; Aug. 29th. H. G. Wallington, G. S. Black, R. G. Hilton, A. W. Mumford, W. G. Coulthurst; Aug. 30th. E. W. Dewell; Aug. 31st.

Sec. Lieuts. (late Gen. List, R.F.C., on prob.) are confirmed in their rank as Sec. Lieuts. (A.):—B. Herbert; April 8th. J. C. Edwards; April 13th. W. R. Thomson; May 15th (substituted for notification in *Gazette*, July 5th). J. E. Machin (since deceased); May 19th (substituted for notification in *Gazette*, June 28th). J. Pollins; June 10th. R. R. Beebe; June 14th. P. C. W. Adams; June 30th. R. J. Whitaker; July 8th. W. A. Rymal; July 23rd. A. H. Allingham, A. Shepherd; July 31st. V. D. Smith; Aug. 1st. J. E. P. Levyns, E. C. F. D. Jacquier; Aug. 9th. H. Proudlove, A. S. Jones, H. McLean; Aug. 15th. W. Walker (date of first commn. March 7th). L. T. Corbett; Aug. 20th. S. F. Case; Aug. 21st. D. McL. Easton; Aug. 23rd. S. Campin, G. C. Cole, A. L. Hadlow; Aug. 24th. G. T. Porter; Aug. 25th. J. A. MacDonald (date of first commn. Feb. 21st); Aug. 27th. H. A. Murton; Aug. 29th. The following prob. Flight Officers (late R.N.A.S.) are granted temp. commns. as Sec. Lieuts. (A. and S.):—W. R. Reid; June 2nd. R. M. Muirhill, E. D. Smith, M. J. Hennessy, F. A. Huycke, W. A. McLeod, M. D. McPherson, G. R. Grange; June 14th. N. C. Wiseman; June 25th. A. J. R. Murray; June 27th. R. H. Boyden; July 28th. A. G. West; July 29th. A. J. O'Neill, H. F. Cullen; July 30th. G. E. Newton; July 31st. J. B. Constorphine; Aug. 9th. W. A. Chase, G. H. Phillips; Aug. 14th. O. P. Bewers; Aug. 17th. D. J. Ancott; Aug. 18th. V. H. Lawrence; Aug. 19th. E. Brewerton, W. George; Aug. 21st. C. Stark; Aug. 22nd. W. A. Hammerton; Aug. 24th.

The following are granted temp. commns. as Sec. Lieuts. (A. and S.):—R. L. Cobham (Lieut., Notts. Hus., T.F.), and to be Hon. Lieut.; July 8th. T. J. D. Reid (Lieut., Lothian and Bord. Horse, T.F.), and to be Hon. Lieut.; July 24th. J. Malley-Martin, M.C. (Sec. Lieut., Bord. R.); Aug. 9th. J. H. Jeffers (Lieut., R.F.A., S.R.), and to be Hon. Lieut.; Aug. 14th. F. H. Ryder (Lieut., Brit. Columbia R., C.E.F.), and to be Hon. Lieut.; Aug. 17th. W. L. Goddard (Sec. Lieut., Bord. R., S.R.); Aug. 18th. A. MacAskill (Lieut., Lond. R., T.F.), and to be Hon. Lieut., A. C. Godfrey (Temp. Sec. Lieut., Midd'x R.); J. A. Chaproniere (Temp. Lieut., Bord. R.), and to be Hon. Lieut., A. M. Campbell (Lieut., R.F.A., S.R.), and to be Hon. Lieut.; Aug. 21st. E. A. H. Goodwin (Sec. Lieut., Suss. R.), R. Leask (Sec. Lieut., High. L.I., T.F.); Aug. 23rd. G. R. Leighton (Sec. Lieut., High. L.I., T.F.); Aug. 24th. C. A. Thelenberg; Sept. 7th. J. A. Payne; Sept. 9th.

Prob. Flight Officer W. T. Edmunds (late R.N.A.S.) is granted a temp. commn. as Sec. Lieut. (K.B.); Aug. 15th.

Sec. Lieut. T. Tarrant (late Gen. List, R.F.C., on prob.) is confirmed in his rank as Sec. Lieut. (Obs. Officer); April 1st.

The following are granted temp. commns. as Sec. Lieuts. (Obs. Officers):—W. Wilkinson (Temp. Sec. Lieut., E. York R.), S. J. Charles (Temp. Sec. Lieut., S. Staff. R.); April 13th. G. Brown (Sec. Lieut., York R., T.F.); Aug. 23rd. H. B. Moicier (Sec. Lieut., R. Ir. Rif.); Sept. 13th.

The following Prob. Obs. Officers (late R.N.A.S.) are granted temp. commns. as Sec. Lieuts. (Obs. Officers):—G. C. Paish, E. M. Bell, C. F. Coates, S. King, P. J. Holmes, N. Gray, H. C. Mann; July 20th. L. Kemp, J. Gargan, A. Dewsbury, F. Pamment, V. F. Dorey, J. H. Spracklin, R. I. Richards, G. C. Fenton; Aug. 30th.

The following Flight Cadets are granted temp. commns. as Sec. Lieuts. (Obs. Officers):—W. A. Bartlett, M. Goddard, S. R. Ham, H. Ingram, G. E. Jemmeson, A. D. Loughbrough, F. Morley-Dingle, R. B. Poole, J. W. Ravenscroft, F. Steel, J. W. Tallin, M. Thompson, H. E. Upton, C. A. Wright, W. H. Gladwell, B. Outram, J. Pate, H. B. M. Plater, A. Stephens, B. McL. Williams, E. Wilson; Aug. 30th. W. Ward, G. W. A. Kely, W. Wilson, J. A. G. Smith, J. McRobb, A. E. Tough, A. B. Lamont, E. B. Driver, W. J. Diment, I. H. Eyres, A. G. Robertson, G. L. Bryars, A. H. Aitken, R. F. Hunter, R. Evans, R. L. Ford; Sept. 2nd. J. G. Nagle, B. A. Heeney, D. A. Cooney, H. M. D. Steagell, A. J. Aspinall, J. Durie, C. J. Clarke, R. H. Bruce, J. A. Senior, F. Towler, G. J. Holdcroft; Sept. 11th.

Lieut. A. McL. MacElwee (Lieut., A. and S. Highrs.) is removed from the Air Force; May 19th.

Lieut. K. A. S. G. N. Fearnside-Speed (Lieut., A.S.C., S.R.) relinquishes his commn.; July 28th.

Lieut. E. R. Davis (Lieut., Worc. R.) relinquishes his commn. on account of ill-health; Sept. 14th.

The following Lieuts. relinquish their commns. on account of ill-health contracted on active service, and are granted the hon. rank of Lieut.:—J. L. H. Blackwood, E. H. Cross; Sept. 14th.

Lieut. O. R. Perkins resigns his commn., and is granted the hon. rank of Lieut.; Sept. 14th.

Lieut. I. P. Graeb resigns his commn.; Sept. 4th.

Lieut. L. R. Lang resigns his commn., having been found permanently unfit for further instructions as Pilot or Observer; Sept. 14th.

The following Sec. Lieuts. resign their commns., having been found permanently unfit for further instructions as Pilots or Observers:—

F. R. Bolten, C. T. Brown, O. C. Buchanan, J. W. Cotter, W. F. Eales, A. S. Greenwood, G. Harrison, R. A. Myers, W. R. Patton, T. Pearson, N. Saville, P. C. de St. F. de Mauremont; Sept. 14th.

The notification in *Gazette*, June 21st, concerning Sec. Lieut. (Hon. Lieut.) E. G. Rumfitt, is cancelled.

The notification in *Gazette*, June 7th, concerning Sec. Lieut. E. H. Weatherall, is cancelled.

The notification in *Gazette*, June 21st, concerning Sec. Lieut. W. W. Gyles, is cancelled.

The notification in *Gazette*, June 7th, concerning Sec. Lieut. H. J. Greenwood, M.C., is cancelled.

The surname of Temp. Capt. A. Lang is as now described and not Long, as in *Gazette*, Aug. 23rd.

Administrative Branch.

The following are granted Temp. commns. as Maj. and to be Temp. Lieut.-Cols. while employed as Lieut.-Cols.:—R. M. R. Lamb, D.S.O. (Maj., North'd Fus.); April 1st. N. G. Darnell (Temp. Maj., R. Innis. Fus.); June 17th.

L. F. W. Willson (Temp. Maj., Glouc. R.) is granted a temp. commn. as Maj.; Aug. 20th.

Capt. F. J. Wiseman to be Temp. Maj. while employed as Maj.; Aug. 27th.

Capt. (Temp. Maj.) T. Macleod retains his temp. rank while employed as Maj. from (T.); Aug. 28th.

C. B. Belt (Temp. Capt., R. Ir. Rif.) is granted a temp. commn. as Capt.; June 1st.

D. N. Stewart Saville, M.C. (Lieut., Lancers), is granted a temp. commn. as Lieut., and to be Temp. Capt. while employed as Capt.; July 26th.

Lieuts. to be Temp. Capt. while employed as Capt.:—(Hon. Capt.) J. McCowan, H. C. Williamson; May 30th. (Hon. Capt.) A. Ferris; June 1st. T. Mack; June 19th. W. Topham; June 28th. R. R. Shaw; July 23rd. M. M. Merriman; Aug. 14th.

Sec. Lieut. A. E. le Sueur to be Temp. Capt. while employed as Capt.; Aug. 6th.

Sec. Lieut. (Hon. Lieut.) A. Duthrie to be Temp. Capt. (without the pay and allowances of that rank) while employed as Capt.; June 28th.

Lieut. (Temp. Capt.) H. E. Tee relinquishes his temp. rank on ceasing to be employed as Capt.; Aug. 22nd.

The following are granted temp. commns. as Lieuts.:—F. C. Smith (Capt., R. Fus.), and to be Hon. Capt.; May 24th. G. H. Tait (Lieut., Cam. Highrs.); June 27th. S. Corrington (Lieut., W. Rid. R.); June 10th. P. V. G. Van der Byl, M.C. (Capt. S.A. Inf.), and to be Hon. Capt.; July 13th. E. A. de Sain (Temp. Lieut., R.F.A.); July 19th. C. F. C. Turner (Lieut., Midd'x R.); July 27th. M. L. FitzGerald (Capt., Cen. Ont. R., C.E.F.), and to be Hon.

Capt.; Aug. 5th. A. S. Dark (Lieut., R. Wel. Fus.); Aug. 12th. M. Tarbet (Temp. Lieut., Dorset R.); Aug. 13th. R. F. Leather (Lieut., R.F.A.); Aug. 17th. E. G. Wood (Temp. Lieut., L'pool. R.); Aug. 19th. H. P. G. Branstion (Capt., N. and Derby R.), and to be Hon. Capt.; Aug. 23rd. W. E. V. Richards (Lieut., Som. L.I.); Aug. 24th. R. F. Cookson (Lieut., R.M.A.); Aug. 26th. E. H. Maddick (Lieut., W. Kent Yeo., T.F.); Sept. 2nd. G. W. Powell (Sub-Lieut., R.N.V.R., R.N.D.); Sept. 3rd.

Sec. Lieuts. to be Temp. Lieuts., while employed as Lieuts.:—J. Robinson; July 26th. A. Barrett, J. S. Shipway; Aug. 19th. (Hon. Lieut.) J. G. Beckham; Aug. 24th.

Lieuts. (A.) to be Lieuts.:—R. J. Montgomery-Moore; April 1st. J. W. Kennedy; Sept. 9th.

Lieuts. (O.) to be Lieuts.:—G. W. Elderkin, W. Noble, D.F.C.; Aug. 31st.

The following are granted temp. commns. as Sec. Lieuts.:—E. G. Barnard; May 21st. A. Bragg, R. B. Cherry, H. J. Coles, J. A. Currie, V. W. G. Day, F. D. D. Gaussen, C. S. Hill, R. S. Lewis, H. T. Mackie, P. H. C. Martin, H. A. Smith, A. T. Welsh, H. B. S. Ballantyne, J. W. Heath, D. Lidderdale, S. Maunder, G. F. Mitchell, R. E. Sharples, L. H. Skelton, H. L. Vahey, E. R. Veneer, W. Wilcock; Sept. 1st. W. J. Collins, A. Gauld, A. Cleave (and to be Hon. Capt.), J. F. Alexander (and to be Temp. Lieut. while specially employed), C. M. Tregurtha, K. C. H. Newman, J. A. McDonald, A. T. Guinevan; Sept. 9th.

Lieut. A. T. A. Nesbitt relinquishes his commn. on account of ill-health, and is granted the hon. rank of Lieut.; Sept. 14th.

Lieut. L. H. Hansen (Lieut., Lond. Yeo.) relinquishes his commn. on account of ill-health contracted on active service; Sept. 14th.

Sec. Lieut. S. R. Swift relinquishes his commn. on account of ill-health, and is granted the hon. rank of Sec. Lieut.; Sept. 14th.

Sec. Lieut. W. E. Angell is dismissed the Service by sentence of a Gen. Court-martial; Sept. 14th.

The notification in *Gazette*, Aug. 30th, concerning Sec. Lieut. (Temp. Lieut.) J. M. Adams is cancelled.

Technical Branch.

R. W. Glennie, C.M.G. (Capt., R.N.), is granted a temp. commn. as Col., with effect from Aug. 15th, seniority April 1st.

Maj. (Temp. Lieut.-Col.) G. B. Stopford retains his temp. rank while employed as Lieut.-Col., from (A. and S.); May 30th.

Lieut.-Col. G. C. St. P. de Dombasle to be Lieut.-Col., from (A. and S.); July 11th.

Lieut.-Col. R. H. Collier, D.S.O., to be Lieut.-Col. from (S.O.); Aug. 27th.

Maj. W. E. Jones to be Temp. Lieut.-Col. while employed as Lieut.-Col. from (S.O.); Aug. 24th.

C. P. Hearle (Lieut.-Comdr., R.N.) is granted a temp. commn. as Maj., with effect from Aug. 15th, seniority April 1st.

A. E. Gendle (Temp. Lieut.-Comdr., R.N.V.R.) is granted a temp. commn. as Maj., with effect from Aug. 15th, seniority April 1st.

Capt. D. R. Verey to be Temp. Maj. while employed as Maj.; May 27th.

Capt. M. D. Bousfield to be Capt., from (Ad.); April 1st.

The following Temp. Lieuts. (R.N.V.R.) are granted temp. commns. as Capts., with effect from Aug. 15th, seniority April 1st:—H. G. Harris, T. R. Garrigan, M. T. Spence, J. Crichton, A. N. Peanel, G. L. H. Douglas Laue, W. Gillou, R. M. B. Mackenzie, W. B. Daniels, C. R. Lynn, G. W. Jones, P. A. Smee, W. A. Ogden, A. D. Macdonald.

A. J. Prince-Cox (Temp. Lieut., R.N.V.R.) is granted a temp. commn. as Lieut., and to be Temp. Capt., with effect from Aug. 15th, seniority as Lieut., R.A.F., April 1st, and seniority as Temp. Capt., April 17th.

H. F. Jackson (Temp. Lieut., R.N.V.R.) is granted a temp. commn. as Lieut., and to be Temp. Capt., with effect from Aug. 15th, seniority as Lieut., R.A.F., April 1st, and seniority as Temp. Capt., May 27th.

Lieuts. to be Temp. Capts. while employed as Capts.:—(Hon. Capt.) C. A. Hudson; June 20th. O. M. D. Bell; Aug. 25th.

Sec. Lieut. (Temp. Lieut.) W. E. Townsend to be Temp. Capt. while employed as Capt.; June 19th.

E. W. Barlow (Temp. Lieut., R.N.V.R.) is granted a temp. commn. as Lieut., and to be Temp. Capt., with effect from Aug. 15th, seniority as Lieut., R.A.F., April 1st and seniority as Temp. Capt., Aug. 1st.

The following Temp. Sub-Lieuts. (R.N.V.R.) are granted temp. commns. as Lieuts. with effect from Aug. 15th, and with seniority from April 1st:—A. G. Maddock, J. Logie, G. Harris, J. H. Grills, P. T. Creswell, A. W. Isherwood, T. D. F. Scott, T. Lightbody, R. Stewart, S. H. Thomas, E. O. Jones.

The following Temp. Sub-Lieuts. (R.N.V.R.) are granted temp. commns. as Lieuts., with effect from Aug. 15th, and with seniority from April 9th:—C. W. Dick, F. C. Wood.

A. Stocks (Temp. Sub-Lieut., R.N.V.R.) is granted a temp. commn. as Lieut., with effect from Aug. 15th, and with seniority from April 18th.

H. A. Gillman (Temp. Sub-Lieut., R.N.V.R.) is granted a temp. commn. as Lieut., with effect from Aug. 15th, and with seniority from April 23rd.

The following Temp. Sub-Lieuts. (R.N.V.R.) are granted temp. commns. as Lieuts., with effect from Aug. 15th, and with seniority from May 30th:—E. J. Goodfellow, G. C. Rawlins.

A. Walters (Temp. Sub-Lieut., R.N.V.R.) is granted a temp. commn. as Lieut., with effect from Aug. 15th, and with seniority from June 7th.

J. Pryce-Jones (Temp. Sub-Lieut., R.N.V.R.) is granted a temp. commn., as Lieut., with effect from Aug. 15th, and with seniority from June 19th.

D. N. Stewart (Temp. Sub-Lieut., R.N.V.R.) is granted a temp. commn. as Lieut., with effect from Aug. 15th and with seniority from June 28th.

L. J. Clements (Temp. Midshipman, R.N.V.R.) is granted a temp. commn. as Sec. Lieut., with effect from Aug. 15th, and with seniority from April 9th.

A. M. Davies (Temp. Midshipman, R.N.V.R.) is granted a temp. commn. as Sec. Lieut., with effect from Aug. 15th, and with seniority from June 20th.

The following are granted temp. commns. as Lieuts.:—C. Brown (Lieut., W. Yorks. R.); June 6th. J. H. S. A. Skinner (Lieut., Gord. Highrs.); Aug. 12th.

Sec. Lieuts. to be Temp. Lieuts. while employed as Lieuts.:—R. C. Brown; May 30th. D. J. Parry; Aug. 29th.

Lieuts. (A.) to be Lieuts.:—H. Monks, M.M.; July 30th. (Hon. Capt.) C. Tollemache; Sept. 9th, and to be Hon. Capt.

Lieuts. (A. and S.) to be Lieuts.:—R. Tyzack; May 5th. J. E. S. Alexander; Aug. 24th. (Hon. Capt.) W. C. Parker; Sept. 2nd, and to be Hon. Capt.

Lieut. (Hon. Capt.) G. R. G. Topham to be Lieut. (Hon. Capt.), from (K.B.); Aug. 28th. Lieut. A. A. D. Toplis to be Lieut., from (O.); June 13th.

The following are granted temp. commns. as Sec. Lieuts.:—O. C. Lees (and to be Temp. Lieut. whilst specially employed); J. Wilson (and to be Temp. Lieut. whilst specially employed); O. W. Penny; W. R. Bernard (late Comdr., R.N., ret. and to be Hon. Maj.); Sept. 9th.

Sec. Lieut. R. B. D. Malden relinquishes his commn. on account of ill-health contracted on active service, and is granted the hon. rank of Sec. Lieut.; Sept. 14th.

The notification in *Gazette*, Aug. 16th, concerning Sec. Lieut. R. P. Coulter is cancelled.

The notification in *Gazette*, Sept. 3rd, concerning Sec. Lieut. W. L. Whitelaw is cancelled.

Medical Branch.

Denial.—D. Campbell is granted a temp. commn. as Sec. Lieut.; Sept. 17th.

Memoranda.

Capt. L. H. Jefferson relinquishes his commn. on ceasing to be employed; Sept. 5th.

Sec. Lieut. J. P. Smith to take rank and precedence as if his appointment as Sec. Lieut. bore date June 1st.

The rank of Capt. H. Spink is as now described, and not as in *Gazette* Sept. 3rd.



THE PFALZ SINGLE-SEATER FIGHTER.

FROM the *Technical Department, Aircraft Production, Ministry of Munitions*, we have received for publication a report on the Pfalz Single-Seater, type D 3. This machine, it may be remembered, was first described in "FLIGHT" as long ago as April 18th, 1918, when we also published three photographs showing the general arrangement of the Pfalz. In our issue of July 25th we commenced an illustrated detail description of the machine, which was continued through the following issues, concluding in that of August 22nd. In view of the fact that our descriptive article on the Pfalz was concluded some weeks ago, and since, moreover, we appear to have dealt with this machine in considerably more detail than is the case with the official report (which latter contains 18 sketches, three photographs, and a scale drawing, while our description was illustrated by 26 drawings and a scale drawing, in addition to the three photographs published in our preliminary article) it is hardly necessary now to publish the official report in full, this rather calling for a few brief remarks.

Looking through the official report on the Pfalz the scale drawing appears to show certain differences from the drawings obtained by us, notably in the shape of the nose of the machine, in the side elevation. Otherwise the dimensions appear to tally fairly well. There is one point to which we should like to call the attention of those responsible for the official reports on enemy aeroplanes: For some time now we have made it one of the features of our illustrated articles to

give very complete drawings of the body, in side elevation and plan, of captured German aeroplanes. We are of the opinion, and judging from the number of letters received, a large proportion of our readers share this opinion, that such drawings are extremely useful as an aid to forming a true picture of the machine represented. We would therefore suggest that, if possible, the inclusion of accurate drawings of the body in future official reports would greatly enhance their value.

For the rest we will confine ourselves to stating that the official report on the Pfalz is illustrated by a series of very excellent sketches, which deal, however, with exactly the same features as were illustrated in our own report. From the subject matter of the report, which is brief and to the point, although it might with advantage have been elaborated, we append the following references to the stability and manoeuvrability of the machine, which were not available at the time when we compiled our article on the Pfalz Single-Seater:—

"This machine is reported to be stable laterally and unstable directionally and longitudinally. It answers well to all controls, much better than does the Albatros D.5, but tends to turn to the left in flight. It is not tiring to fly, and is normally easy to land. Though the tail skid is of the non-steering type, no difficulty is found in directing the machine on the ground."

Coming Home to Roost.

Nor the least interesting of the captures during the recent fighting has been an order signed by Ludendorff himself, which says:—

"No one is to open fire upon an aeroplane without personally making sure that there is no iron cross on the machine, or that the distinctive enemy markings are visible. It is very improbable, and has never yet been proved, that the enemy

makes use of our national markings in order to deceive us. Fire should therefore never be opened once the iron cross is seen. This rule must be strictly observed."

It will be recalled that the Germans have persistently tried officially to discredit us by saying that we have used German marking on our machines, and now they have been forced to testify to our honesty, apparently because his own men have brought down German machines.

LEISURE HOURS.

THERE was an interesting ceremony "down south" the other day when Brig.-Gen. W. Alexander, C.M.G., D.S.O., opened a new canteen, to be run under the auspices of the Y.M.C.A., at the works of Messrs. May, Harden and May, Ltd. Afterwards the firm's employees held their first annual sports, which provided keen competition in all the events. One of the most sporting items was a mile relay race in which the final was a great tussle between two teams from Calshot, the "A" team eventually carrying off the prizes. A U.S. naval aviation team made good showing in the early stages, but failed to stay the distance. During the afternoon a fine display of flying was seen and afterwards a concert and dancing rounded off a most pleasant day.

A PLEASANT mixture of river picnic and sports was enjoyed by the employees of Messrs. S. Smith and Sons, the well-

known instrument makers, whose headquarters are at Great Portland Street, on September 12th. A party of 200 left Richmond on two steamers, under the care of Mr. Bussell, and although the weather was showery the music on the boats kept everyone in good spirits. On arriving at Chertsey lunch was taken and then a short programme of sports was carried through. After tea, the return trip was made by river to Kingston, and the first of what is expected will be a series of annual events of a similar nature was brought to a very successful conclusion.

ALTHOUGH the weather seemed determined to spoil the Whitehead sports which had been fixed for Saturday last, it failed completely. Notwithstanding an occasional shower, the programme was carried through according to the time table. In distributing the prizes, Lady Haig appealed to the



SPORTS AT WHITEHEAD'S AEROPLANE FACTORY.—1. Ladies' tug-of-war. Examining the "boots" to see that no one has spikes in. 2. Presentation of a bouquet to Lady Haig by Master Keith Whitehead. 3. Mr. Whitehead (on right) and Commander Wheatley, who was in charge of the boys of the Navy Brigade. 4. Tug-of-war, the Richmond Team; and 5, the Feltham Team. 6. 880 yards handicap. T. A. Bass, winning. 7. A few "sacked" girls waiting for the start. 8. Special 100 yards race between J. Aggersburg (No. 7, who won) and T. J. Stark.



MESSRS. S. SMITH AND SONS (M.A.), LTD., RIVER TRIP AND SPORTS.—1. The launches waiting to get in Sunbury Lock. 2. An example of the holiday spirit. 3. From left to right, Messrs. Bussell, Grose, Facks and Wadman. 4. Tug-of-war: The Assembling Shop Team. 5. Ladies' 100 yards race. 6. They kept smiling through the showers during the sports.

workers to speed up their efforts and put in every hour they could. She added, "We have passed through a very critical time, and I appeal to you to keep up the supply of machines, and so hasten the victory which we see in view." A silver cup for a race for ex-soldiers was inscribed:—"From Alexandra, Victoria, and 'little' Douglas Haig," and the ex-soldiers presented Lady Haig with a plaster cast horseshoe, which was picked up in "Plug Street," near Armentières.

The workpeople, through Mr. J. A. Whitehead, presented Lady Haig with a silver model aeroplane, suitably inscribed.

ALL who take an interest in the fistic art should note that the Falcon Aircrew Co. have arranged a boxing entertainment for the benefit of wounded soldiers at the St. John's Hall, St. John's Road, Holloway, on Saturday next. It commences at 3 o'clock.

A Chicago-New York Flight.

ACCORDING to a message from the *Times* correspondent in New York, Mr. Edward Gardner made the journey from Chicago with only three stops last week. "He started in blinding rain at 6.45 in the morning and landed at Belmont Park at 8.15 in the evening. Owing to the fact that the signal fires lit to guide him were not visible at 5,000 feet altitude, he was obliged to hover over the Park for half an hour, and finally to descend in an adjacent field with a slight mishap. Allowing for stops at Bryan (Ohio), Cleveland, and Lock Haven (Pennsylvania), Mr. Gardner's actual flying time for the 800 miles was 6 hours 40 minutes, or 120 miles an hour. He consumed 250 gallons of petrol and seven gallons of oil, and is extremely enthusiastic over the qualities of the Liberty motor, as demonstrated in this flight."

A Brave Rescue Rewarded.

FIRST-CLASS AIR MECHANIC J. H. CRONIN has received the

bronze medal and certificate of the Royal Humane Society for rescuing a comrade from drowning at Plymouth.

From Germany to Switzerland.

THE following soldiers, who were prisoners of war in Germany, have arrived in Switzerland for internment:—

R.F.C.—Conlin, 106942 P.; Everix, 3217 M. H.; Guyat, 36287 J. G.; Hoggard, 49929 T. H.; 4630, W. Organ.

Home from Germany.

THE following soldier, who was a prisoner of war in Germany, has arrived in England:—

R.F.C.—Loughlin, 39972 J. W.

Memorial to Ludendorff's Airmen Sons.

IN the Kaiser Wilhelm Memorial Cemetery at West End, near Berlin, an ornate column has been put up in memory of the two youthful sons of Ludendorff, both of whom were killed on the western front while serving in the air force.

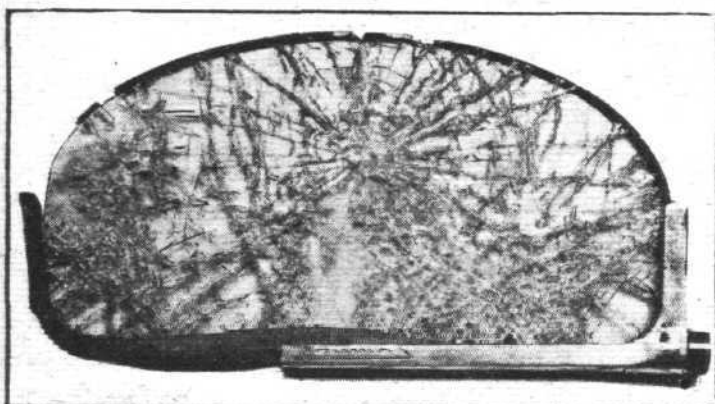
SIDE-WINDS.

MESSRS. W. P. THOMPSON AND Co., the well-known patent and trade mark agents, have transferred their headquarters from 6, Lord Street (where they have been for 45 years), to Coopers' Building, Church Street, Liverpool.

MR. LEO J. SHORTER, who has been since 1914 chief draughtsman of the Sunbeam Motor Car Company, Wolverhampton, has joined the well-known organisation of Arrol-Johnston, Ltd., at Dumfries, in a similar capacity. Previous to joining the Sunbeam, Mr. Shorter had a number of years' experience with the Humber Company, Coventry; and now, like many other young men of ideas and organising ability, he quite naturally gravitates towards Arrol-Johnston enterprise, where, needless to say, he will have ample scope and receive every encouragement to still further develop his talents.

THOSE who at any time have orders for pattern making to place should note that the Coventry Premier, Ltd., Coventry, are in a position to undertake work of this nature.

AFTER the end of this month Messrs. W. D. Oddy and Co. will have their headquarters at Globe Road, Holbeck, Leeds, and all who do business with this firm should make a note of the change. The telephone numbers will then be 20547 and 20548.



The Triplex screen taken from the machine in which the late Major McCudden, V.C., D.S.O., M.C., met his death. It will be noticed the whole of the Triplex glass is intact, although half the metal frame has been broken away.

COMPANY MATTERS.

Sir W. G. Armstrong, Whitworth and Co.

THE directors of Sir W. G. Armstrong, Whitworth and Co. have declared an interim dividend for the half-year ended 30th June last at the rate of 10 per cent. per annum (free of tax up to 5s. in the £ only) on the ordinary shares, payable after the 30th inst.

British Aluminium Co.

THE directors of the British Aluminium Co. announce a dividend at the rate of 8 per cent. per annum, less income tax, on the ordinary shares for the six months ended June 30th last, payable October 1st.

A. Darracq and Co. (1905), Ltd.

THE directors of A. Darracq and Co. (1905), Ltd., have declared a dividend at the rate of 7 per cent. per annum on the preferred ordinary shares for the half-year ending 30th inst., payable October 1st, less tax.

Vickers, Ltd.

IN view of his advanced age and somewhat failing health, Mr. Albert Vickers has placed his resignation of the chairmanship of Vickers, Ltd., in the hands of the board, which they have accepted with sincere regret.

Mr. Vickers's resignation took place as from Monday, which was his 80th birthday, and Mr. Douglas Vickers has been appointed chairman to succeed Mr. Albert Vickers as from that date.

NEW COMPANIES REGISTERED.

FORD'S GARAGE AND CYCLE CO., LTD.—Capital £20,000, in £1 shares. Acquiring business carried on at Alnwick and Berwick-on-Tweed as "Ford's Garage and Cycle Co."; also aeroplane and aero engine manufacturers, &c. First directors: C. B. Ford, F. Hardy and A. D. F. Patten.

IKAROS AIRCRAFT AND MANUFACTURING CO., LTD., Effingham House, Arundel Street, W.C. 2.—Capital £5,000, in £1 shares. Manufacturers of and dealers in devices, appliances and machinery for aerial and water navigation, &c. First directors: A. C. Moschonas and D. Anghelato (both Greek).

NAVARRO AVIATION CO., LTD., 5, Victoria Street, S.W.—Capital £35,000 in £1 shares (15,000 10 per cent. cum. preference and 20,000 ordinary). Under agreement with H. B. Stocks.

IMPORTS AND EXPORTS, 1917-1918.

AEROPLANES, airships, balloons, and parts thereof (not shown separately before 1910). For 1910 and 1911 figures see "FLIGHT" for January 25th, 1912; for 1912 and 1913, see "FLIGHT" for January 17th, 1914; for 1914, see "FLIGHT" for January 15th, 1915; for 1915, see "FLIGHT" for January 13th, 1916; for 1916, see "FLIGHT" for January 11th, 1917; and for 1917, see "FLIGHT" for January 24th, 1918.

	Imports.		Exports.		Re-Exportation.	
	1917.	1918.	1917.	1918.	1917.	1918.
January...	10,842	49,402	67,033	24,765	—	—
February...	9,479	51,941	26,512	13,545	6	—
March...	11,158	47,930	58,517	11,451	—	1,000
April...	21,141	33,342	21,151	10,815	—	—
May...	6,877	942,866	59,713	67,224	—	—
June...	2,670	864,296	14,647	35,658	—	—
July...	9,104	1,834,293	106,250	10,800	—	—
August...	18,680	566,137	68,315	71,503	258	—
	89,951	4,390,207	422,138	245,761	264	1,000

Aeronautical Patents Published.

Abbreviations:—cyl. = cylinder; I.C. = internal combustion; m. = motors.

Applied for in 1917.

The numbers in brackets are those under which the specifications will be printed and abridged, &c.

Published September 19th, 1918.

12,673. J. ASHWORTH. Flying-machines. (118,347.)

13,717. G. BREWER and M. H. SPENCER. Air-speed indicators for kite balloons. (118,352.)

NOTICE TO ADVERTISERS.

IN order that "FLIGHT" may continue to be published at the usual time, it is now necessary to close for Press earlier. All Advertisement Copy and Blocks must be delivered at the Offices of "FLIGHT," 36, Great Queen Street, Kingsway, W.C. 2, not later than 12 o'clock on Saturday in each week for the following week's issue.

If you require anything pertaining to aviation, study "FLIGHT'S" Buyers' Guide and Trade Directory, which appears in our advertisement pages each week (see pages lix, lx, lxi and lxii).

FLIGHT

and The Aircraft Engineer.

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12 " " " " " "	28	2	12 " " " " " "	33	0

These rates are subject to any alteration found necessary under war conditions.

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